

(No Model.)

A. G. GUMAER & J. G. W. KNOLL.
SERPENTINE LAWN SPRINKLER.

No. 374,960.

Patented Dec. 20, 1887.

Fig. 1.

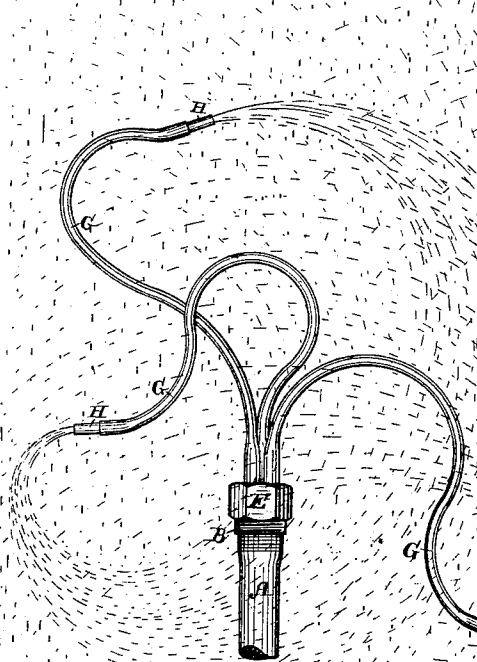


Fig. 2.

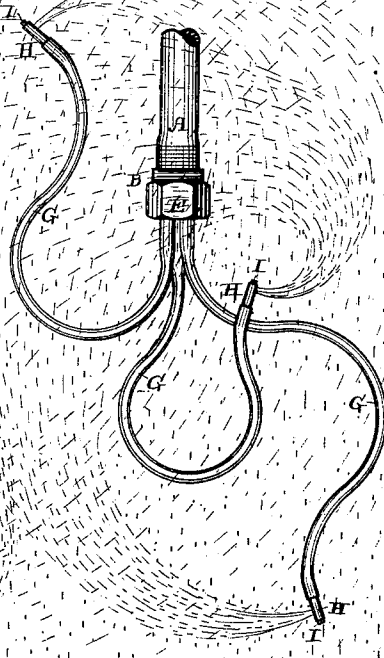


Fig. 3.

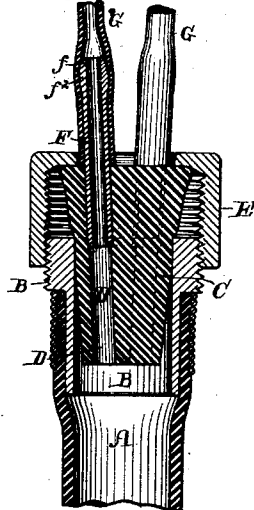


Fig. 4.



Fig. 5.



WITNESSES

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SERPENTINE LAWN-SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 374,960, dated December 20, 1887.

Application filed August 26, 1887. Serial No. 247,967. (No model.)

To all whom it may concern:

Be it known that we, ADELBERT G. GUMAER and JOHN G. W. KNOLL, of the city of Buffalo, county of Erie, and State of New York, have invented certain new and useful Improvements in Serpentine Lawn-Sprinklers, of which the following is a specification, reference being had to the accompanying drawings, in which—

10 Figure 1 is a view of our sprinkler attached to the end of a hose pointing upward and with the ends of the sprinkler-nozzles open. Fig. 2 is a view of the sprinkler attached to the end of a hose pointing downward and with
15 the ends of the nozzles closed. Fig. 3 is a section of a hose and coupling for attaching our sprinkler, showing the perforated plug and the manner in which we may connect the flexible tubes to it; and Figs. 4 and 5 are sectional views of the nozzles of the sprinklers detached.

The object of our invention is to produce a lawn-sprinkler that shall thoroughly distribute water in various small streams or jets
25 and drop it all over a certain circular area as nearly like rain as practicable, and at the same time present a unique and attractive appearance and be convenient to apply in use. To this end we provide a serpentine sprinkler
30 to be connected to an ordinary hose or other device containing water under pressure, in the manner illustrated in the drawings, and hereinafter described.

Our invention consists in the combination
35 of parts for particular improvement of such a sprinkler, succinctly stated in our claims.

We mean by the phrase "serpentine sprinkler" a sprinkler that in action moves very much like a serpent fastened by its tail and
40 wriggling and springing about in a frantic endeavor to get away, and such is the appearance and action of our sprinkler. As it is composed of several small wriggling serpentine tubes or sprinklers in a bunch, it presents a life-like appearance that arrests attention and interests spectators and forms a considerable feature of the practical utility of the device in operation, because in practice the device is placed in show-windows and other
45 conspicuous places for display and advertising purposes.

Referring to the letters upon the drawings to aid in describing in detail a device embodying our improvements, C indicates a tapered plug, preferably of rubber, adapted to enter
55 the opening in the end of the hose-coupling B upon the hose A. The plug C is provided with more or less holes, D, generally at least three.

E designates an internally screw-threaded
60 cap adapted to screw on over the coupling B and to bear upon the top of the plug C and force it tightly into the coupling B.

F designates small hard-rubber or other suitable tubes, which are firmly secured within
65 the holes D of the plug C. These tubes are chamfered at *f* to prevent their cutting the small flexible or serpentine rubber tubes G, which are secured to them. The tubes F are also provided with an annular roughened pro-
70 jection, *f*², to make a firm connection with the flexible tubes G, as shown in the drawings. The tubes F might be omitted and the tubes G be made a part of or connected to the plug C. The tubes G are provided with nozzles H,
75 made of hard rubber or other suitable material, and provided with one or more small openings, as illustrated, either in the end or at one side, or both.

I indicates a small screw-plug adapted to
80 close the end hole in the nozzle H and cause the water to escape from the side hole, which is always open. Whenever the end hole is open, the water will escape there as if there were no side hole, because it will not change
85 its direction to pass out of the side hole.

K indicates an annular projection upon the nozzle H for connecting it securely to the serpentine tube, as represented in the drawings. The result of this construction is that our im-
90 proved serpentine sprinkler can be readily attached securely to place for operation, and it is not likely to wear out or get out of order.

The operation is as follows: The plug C, when in place, checks the flow of water from
95 the hose A, and as the openings through the plug and through the serpentine tubes are smaller in combined transverse area than the opening in the hose the result is that the pressure of water is increased and the water
100 spurts out of the nozzles of the serpentine tubes in small streams with considerable force.

The effect is to make the serpentine tubes wriggle and gyrate or dance about in the air in a very comical manner and in a very effective manner for sprinkling purposes. The water is tossed about in the air in an infinite variety of directions and separates into drops and falls all over the ground exactly like rain. A circle of about twenty-five to forty feet in diameter, according to the force of water-pressure, can be thoroughly sprinkled.

The serpentine sprinkler thus works automatically, but without driving any machinery in the ordinary way, and hence is economical and efficient without being liable to wear out or get out of order, because it contains no revolving wheel or other like mechanism, and it is a great practical advantage to provide, as illustrated, for the use of several wrigglers or sprinklers in a bunch.

Having described our improved serpentine sprinkler, what we claim to be new, and desire to secure by Letters Patent of the United States, is—

1. In a serpentine sprinkler, the combination of a tapering perforated plug, C, adapted

to be forced into the end of a hose or the like, with tubes F, secured in holes in the plug, flexible serpentine tubes G, secured to the tubes F, and nozzles H upon the free ends of the flexible tubes, substantially as set forth.

2. In a serpentine sprinkler, the combination of the internally screw-threaded cap E, adapted to fit over the coupling B, the tapering perforated plug C, forced into the coupling B by the cap E, and the flexible serpentine tubes G, secured in the plug C and provided with nozzles H, substantially as set forth.

3. In a serpentine sprinkler, the combination of a tapering perforated plug, C, adapted to be forced into the end of a hose or the like, and the flexible serpentine tubes G, connected therewith and provided with the nozzles H, substantially as set forth.

In testimony whereof we have hereunto subscribed our names.

ADELBERT G. GUMAER.
JOHN G. W. KNOLL.

Witnesses:

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