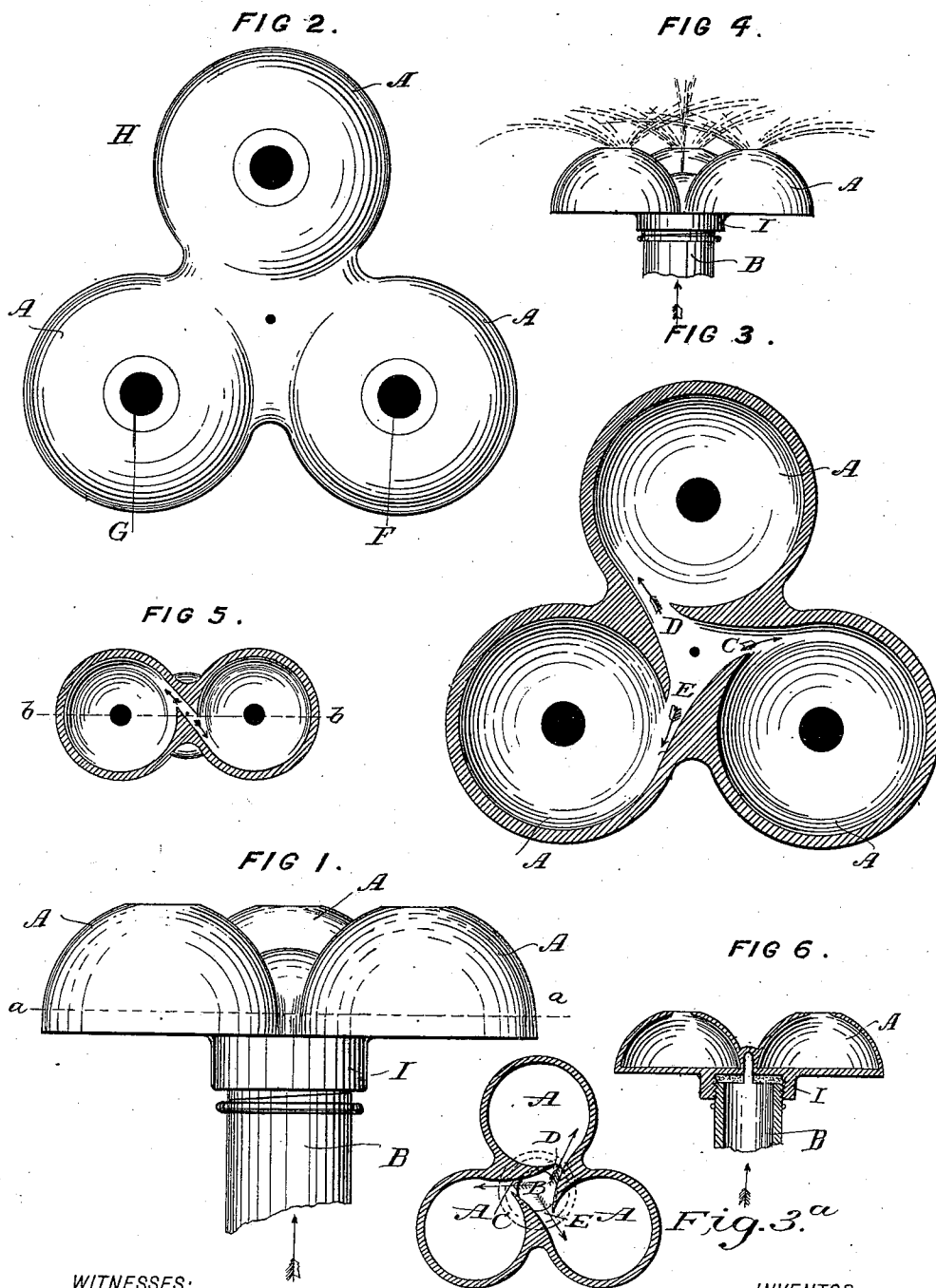


(No Model.)

J. P. VAN SICKLE.
LAWN SPRINKLER.

No. 564,349.

Patented July 21, 1896.



WITNESSES:

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JOHN PULASKI VAN SICKLE, OF PASADENA, CALIFORNIA.

LAWN-SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 564,349, dated July 21, 1896.

Application filed September 15, 1894. Serial No. 523,128. (No model.)

To all whom it may concern:

Be it known that I, JOHN PULASKI VAN SICKLE, a citizen of the United States, residing at Pasadena, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Lawn-Sprinklers, otherwise known as Irrigators, of which the following is a full, clear, and exact description or specification, reference being had to the annexed sheet of drawings, illustrating my said improvements and forming part of this said specification.

My said invention relates to that class of lawnsprinklers or irrigators in which the sprinkling or irrigating instrument is a stationary body wherefrom the water issues through two or more orifices (by preference three orifices) in the upper part of the sprinkler or irrigator, and in such manner that the issuing water has a tangential motion imparted to it by reason of the manner of its entrance into and exit from the body of the sprinkling apparatus.

In addition to the aforesaid two, three, or more orifices in the upper part of the sprinkling or irrigating device a small central hole may also be formed in the upper part of the device for admitting of a small jet of water issuing vertically upward therefrom and breaking over in its descent in the form of spray. Such small central orifice is, however, not an essential feature of my present improvements and therefore may or may not be dispensed with.

In this class of lawn sprinklers or irrigators as hitherto constructed or used, excepting in the case of my other improved sprinkler or irrigator, application for a patent for which is filed of even date herewith, Serial No. 523,127, the circular portion of the ground for some distance around the sprinkler or irrigator has been but only slightly or very incompletely sprinkled, this defect being due to the centrifugal rotation of the water, causing it to be thrown for some distance upward and outward before falling upon or striking the ground being sprinkled or irrigated.

The object of my present improvements is the same as the object of my other improvements described and set forth in the specification accompanying my application for Letters Patent filed of even date herewith,

namely, to insure that some of the water escaping from the central orifice of one part or chamber of the sprinkler or irrigator shall strike against some of the water issuing from the other or more than other such orifice, thereby causing a portion of the two sprays or more than two sprays, according to the number of such orifices as are used, to strike against each other, thereby causing these portions of the water-jets to be broken up immediately on their escaping from the said orifices and to fall in spray or broken water on that portion of the ground immediately surrounding the sprinkler or irrigator, while the rest of the water sprinkles or irrigates the further portion of the ground lying outside the aforesaid central portion.

In the accompanying drawings, Figure 1 is an elevation of my improved sprinkler or irrigator, having three main orifices and a small central orifice. Fig. 2 is a plan of the same. Fig. 3 is an inverted horizontal section on the line *a a*, Fig. 1. Fig. 3^a is another horizontal section on the line *a a*, Fig. 1, having the domes cut off and showing the manner in which or the channels whereby the water reaches the domed chambers from the supply-pipe. Fig. 4 is another elevation of the same on a smaller scale and corresponding to Fig. 1, but showing the adjacent parts of the jets of water striking against each other and breaking up the water, so as to insure it falling on the ground closely around the sprinkler. Fig. 5 is a plan, on a smaller scale, of the same sprinkling or irrigating instrument, but with two discharge chambers and orifices. Fig. 6 is a vertical section on the line *b b*, Fig. 5.

In Figs. 1, 2, 3, and 4 it will be observed that there are three circular chambers A, connected together at the center to a vertical tube B, which branches out into tripartite horizontal channels C, D, and E, respectively, (more particularly shown in Fig. 3^a.) each one of which leads more or less tangentially into the bottom of one of the chambers A. The water arrives in the improved sprinkler or irrigator in a vertical course, as shown by the arrows in Figs. 1, 4, and 6, from which it diverges in a horizontal course in three different divisions, one to each of the chambers A, as shown by the arrows at Fig. 3,

around and through which it travels with a circular motion until it reaches the respective orifices F, G, and H at the center of the upper part of each chamber A. The water
5 therefore escapes from each of the central orifices F, G, and H with a tangential motion, and in so doing the parts of each discharge of water therefrom which are adjacent to one another strike against each other and inter-
10 fere with each other's proper motion as to be broken up, whereby such portions of water are caused to fall in spray upon that portion of the ground immediately surrounding the sprinkler or irrigator, while the other por-
15 tions are scattered to sprinkle or irrigate that portion of the ground lying outside or beyond the central portion immediately surrounding the improved irrigator or sprinkler. In this manner the whole of the ground sur-
20 rounding the irrigator or sprinkler is properly irrigated or sprinkled so far as the pressure used admits of the spray being spread outward.

The internal contour of the chambers A is
25 preferably dome-shaped, as in the case of the other sprinkler or irrigator described in the specification accompanying my application for Letters Patent of even date herewith, but it is not essential that the chambers should
30 be dome-shaped.

The sprinkling instrument or irrigator has a screwed thread formed inside the vertical socket I at the center of its under side, where-
35 by it is attached to the metallic coupling in a pipe B.

For purposes of convenience in use the ver-

tical pipe B has a flexible tube (not shown in the drawings) connected thereto for the purpose of conveying the water to the sprinkler or irrigator from its source of supply.

40 Having now described the nature of my said invention and the manner of carrying the same into practice, I desire to observe in conclusion that I have on the annexed sheet of drawings shown the construction and ar-
45 rangement of my apparatus or device in the forms which with test and experience I have found and believe to be the best manner of carrying my said invention or improvements into practice.

50 What therefore I believe to be novel and original, and claim as the invention to be secured to me by Letters Patent, is as follows:

A lawn sprinkler or irrigator consisting of two or more circular chambers, each having
55 a central discharge-orifice at the upper part, a vertical entrance-passage for the water, common to said chambers at the center of the under part of the sprinkler from which passages or avenues diverge horizontally, one
60 to each chamber in a direction approximately tangential to the circular wall of each chamber, the whole operating in the manner and for the purposes substantially as set forth.

65 In testimony whereof I have hereunto set my signature in presence of two subscribing witnesses.

JOHN PULASKI VAN SICKLE.

Witnesses:

ST. JOHN DAY,
W. H. WAGNER.