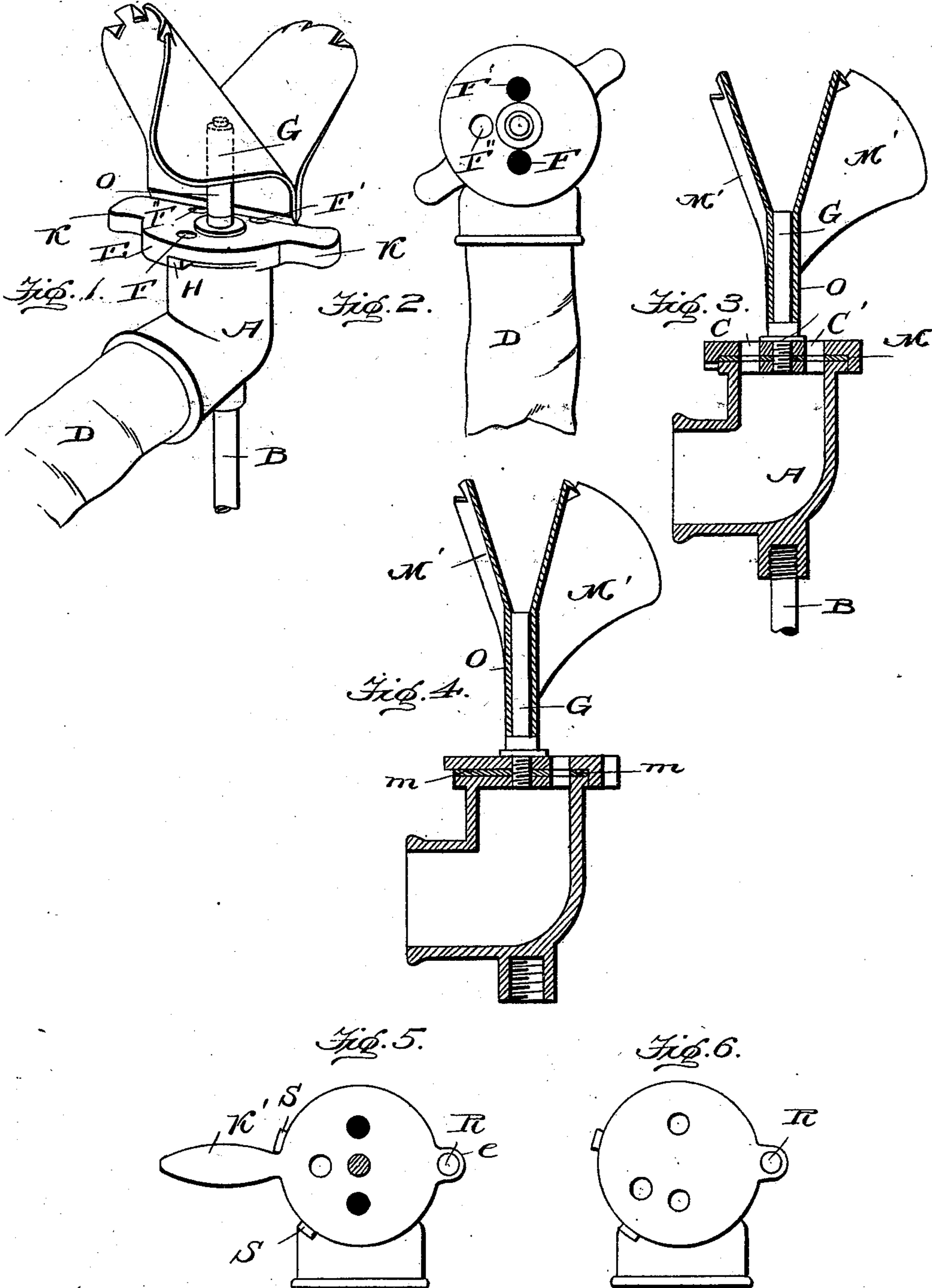


(No Model.)

W. RUNDQUIST.
LAWN SPRINKLER.

No. 513,957.

Patented Jan. 30, 1894.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM RUNDQUIST, OF ELGIN, ILLINOIS, ASSIGNOR OF ONE-HALF TO
HENRY GUY WEATHERILL, OF SAME PLACE.

LAWN-SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 513,957, dated January 30, 1894.

Application filed August 3, 1893. Serial No. 482,296. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM RUNDQUIST, a citizen of the United States, residing at Elgin, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Lawn-Sprinklers; 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 appertains to make and use the same.

My invention relates to improvements in lawn sprinklers of that class which employ revolving wings or blades to convert a stream of water into a fine spray and uniformly distribute the same over a given area; and the object of the invention is to provide simple means whereby the direction of the spray can be easily regulated according to the extent and form of the space it is desired to sprinkle. With this end in view my invention consists in the combination with a nozzle adapted to be connected with a hose or supply pipe and provided with suitable discharge openings, and a pair of revoluble distributing wings or blades supported from the nozzle, of a regulating plate supported by the nozzle and adapted to direct the water issuing therefrom against both or only one of the distributing wings whereby the spray may be distributed over a circular area, of which the nozzle is the center, or over only a portion of said area, as desired.

My invention further consists in the peculiar arrangement and construction of parts as will be hereinafter more fully pointed out and claimed.

In the accompanying drawings—Figure 1 is a perspective of my improved lawn sprinkler. Fig. 2 is a plan view with the blades or wings removed. Fig. 3 is a sectional view showing the sprinkler arranged to sprinkle a circular space. Fig. 4 is a similar view showing the sprinkler arranged to sprinkle on one side only. Fig. 5 is a plan view of a slightly modified construction, and Fig. 6 is a similar view with the cap removed.

Like letters of reference denote corresponding parts in all the figures of the drawings, referring to which—

A designates the nozzle of my improved lawn sprinkler. As shown in the drawings the

nozzle is, preferably, made in the form of an elbow and is supported by a standard or support B. The support is preferably threaded at its upper end and screwed into an internally threaded socket in the lower portion of the nozzle A. In the upper closed end of the nozzle, A, are formed two apertures C, C', and the other arm of the elbow is adapted to have a hose, D, which leads from a suitable source of supply, attached thereto. A cap, E, is fitted over the upper end of the nozzle and in such cap are formed three openings F, F', F''. The cap E is provided with an annular downwardly extending flange that extends around the body of the elbow and said nozzle and cap are connected by a pin G that is passed through a passage arranged in the center of the cap, in line with the openings F, F', therein, and has its lower end threaded and screwed into a socket formed in the upper end of the nozzle A between the apertures C, C', therein. The annular flange on the cap E is reduced or cut away for a portion of its length to allow a stud or pin H, which is rigidly attached to or formed integral with the nozzle, to project slightly beyond the surface of the flange. Lugs K are rigidly attached to or formed integral with the cap E at diametrically opposite points and by means of said lugs the cap can be turned about the pin G, as a pivot, to cause the openings F, F', therein to align with the apertures C, C', in the upper end of the nozzle or in a reverse direction to cause the opening F'' to align with the aperture C'. When in this position the aperture C will be closed by the solid portion of the cap. The movement of the cap E is limited by the stud H. A washer M is secured within the cap to prevent any water from escaping between the cap and nozzle. Said washer is held in place within the cap by means of spurs or brads m carried by the cap and in the washer are formed openings that align with the openings in the cap. The upper portion of the pin G is reduced in diameter to provide, near the lower end thereof, an annular seat. On said pin are loosely mounted, so as to rotate freely under the impact of water escaping through the openings in the cap, two distributing wings or blades M'. Said wings or blades are connected at their lower ends and between

them is rigidly secured a short sleeve O through which the pin G extends, the lower end of said sleeve resting on the annular seat before referred to. The inner surfaces of the wings or blades N are made concave and opposite edges thereof are bent or curved inwardly to catch all water issuing from the openings in the cap.

The operation of my improvements, is as follows: When the cap is turned so that the openings F, F', therein align with the apertures C, C', in the nozzle, as shown in Fig. 3, water issues through such openings and strikes against both of the blades N and is thereby sprayed over a circular space around the nozzle. The water striking the blades N causes them to revolve about the central pin G. When it is desired to sprinkle a space at one side of the nozzle only, the cap E is turned so that the opening F'' therein aligns with the aperture C' and the aperture C is closed. When in this position the water issues only on one side of the central pin and comes in contact with the blade N on that side only. This arrangement is particularly applicable for sprinkling ground at one side of a sidewalk without wetting the walk.

In Figs. 5 and 6 of the drawings I have illustrated a slight modification of my invention. In this construction the cap E is provided with an ear e, and with a thumb piece K'. The ear, e, and a similar ear on the nozzle are connected by a pivot pin R; and by means of the thumb piece K' the cap can be turned to cause one or two of the openings in the cap to align with one or two of a series of three discharge openings in the nozzle. The handle or thumb piece K' projects between parallel upwardly extending lugs, S, on the nozzle by which movement of the cap is limited. In this modified construction the pin, G, on which the distributing wings or blades are mounted is carried by the cap and is not directly connected with the nozzle.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a nozzle adapted to be connected with a hose or supply pipe and having suitable discharge openings, and a pair of distributing wings or blades supported by the nozzle, of a regulating plate carried by the nozzle and adapted to regulate the passage of water therethrough and direct the same against one or both of the distributing wings, substantially as and for the purpose described.

2. The combination with a nozzle adapted to be connected with a supply pipe and having discharge openings in its upper end, and two revoluble distributing wings or blades supported by the nozzle, above the discharge openings therein, of a movable regulating plate carried by the nozzle and provided with a series of openings, two of which are arranged in line with but on opposite sides of the support of the distributing wings, whereby said

plate can be moved to cause a single opening therein to align with one opening in the nozzle and direct water issuing therefrom against one distributing wing or to cause openings, on opposite sides of the support of the distributing wings, to align with openings in the nozzle and direct the water against both of said wings, substantially as and for the purpose described.

3. The combination with a nozzle adapted to be attached to a hose or supply pipe and having two discharge openings in its upper end, of a pin secured in the upper end of the nozzle between and in line with the openings therein, and a regulating plate fitted loosely around the pin, below the distributing wings thereon and adapted to close one of the discharge openings in the nozzle, thereby causing water issuing from the nozzle to strike against only one of the distributing wings, or to leave both discharge openings free and permit the water issuing from the nozzle to strike both of the distributing wings, substantially as and for the purpose described.

4. The combination with a nozzle adapted to be connected with a hose or supply pipe and provided at its upper end with discharge openings, and two revoluble distributing wings supported by the nozzle and extending across the discharge openings therein, of an external cap fitted about the upper end of the nozzle and provided on its inner surface with a series of brads or spurs, a washer fitted within the cap and held therein by said brads or spurs, said cap being adapted to move a limited distance to cause openings therein to align with one or more of the discharge openings in the nozzle and direct the water issuing therefrom against one or both of the distributing wings, substantially as and for the purpose described.

5. The combination with a nozzle adapted to be connected with a hose or supply pipe and provided, at its upper end, with two discharge openings, and having on one side a laterally projecting stud or lug, a pin secured to the nozzle between and in line with the discharge openings therein, revoluble distributing wings mounted on said pin, a cap fitted loosely around the pin and extending across the upper end of the nozzle and having a portion of its periphery, on both sides of the lug on the nozzle, provided with a depending flange, whereby said cap may be moved a limited distance to cause openings therein to align with one or both of the discharge openings in the nozzle and direct water issuing therefrom against one or both of the distributing wings, substantially as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM RUNDQUIST.

Witnesses:

R. K. PLUMLEIGH,
G. AURELIUS.