Nov. 29, 1932. A. S. LYNDON 1,889,257

SPRINKLER

Filed Oct. 12, 1931

Fig. 1.

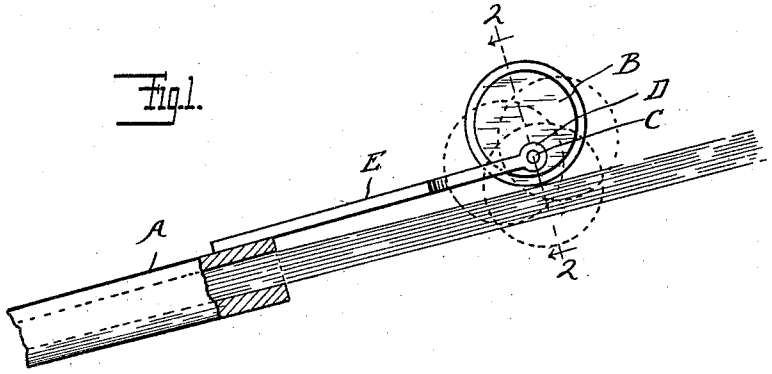
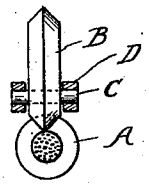


Fig. 2.



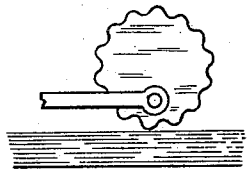


Fig. 3.

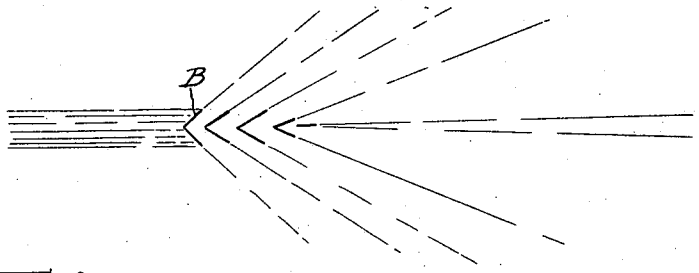


Fig. 4.

INVENTOR

Alford S. Lyndon

BY Whittemore Hulbert

Whittemore & Belknap

ATTORNEYS

Patented Nov. 29, 1932 1,889,257

UNITED STATES PATENT OFFICE

ALFORD S. LYNDON, OF ANN ARBOR, MICHIGAN, ASSIGNOR OF ONE-HALF TO CHARLES H. BENNETT, OF PLYMOUTH, MICHIGAN

SPRINKLER

Application filed October 12, 1931. Serial No. 568,482.

The invention relates to sprinklers designed for use in the watering of lawns and in other places where it is desirable to distribute the water as uniformly as possible over a predetermined area. This is accomplished in various ways such as by the use of revolving nozzles or by obstructing the stream discharged from the nozzle so as to spread it laterally. With the revolving type the area which can be reached from a single point is greater than where the stream is obstructed or deflected, but the distribution of the water within this area is not as uniform.

It is the object of the present invention to obtain a construction which will combine the advantages of the maximum length of throw from the nozzle with a uniformity of distribution of the water within this area and to this end the invention consists in the construction as hereinafter set forth.

In the drawing:

Figure 1 is a longitudinal section through the discharge end of a nozzle of my improved construction;

Figure 2 is a cross section thereof on line 2—2 of Figure 1 with the wheel shown in elevation;

Figure 3 is a view similar to a portion of Figure 1 showing a modified construction;

Figure 4 is a diagram illustrating the manner in which the stream is deflected in successive positions of adjustment of the wheel.

A is the discharge end of a sprinkler nozzle which may be either stationary or revolving. B is a rotary wheel or disk provided with an eccentric journal C mounted in a bearing D on a bracket E or other forward projection from the nozzle. The wheel or disk B is so proportioned that when turned with its minor radius extending towards the path of the stream issuing from the nozzle, it will substantially clear the stream, while on the other hand when turned with its major radius in this direction it will extend completely across the stream. Intermediate these two positions the disk or wheel will obstruct the stream to a variable extent. Thus assuming the disk is initially in the position shown in full lines, Figure 1, water issuing from the nozzle and impinging thereagainst will cause a rotation about the eccentric axis. This will withdraw the obstruction until the stream is clear and then progressively increase the obstruction to the completion of the cycle. This cycle is repeated as long as water is issuing from the nozzle and the effect is to distribute the water with substantial uniformity over the area between the longest and the shortest throw.

I preferably form the periphery of the wheel of a V-shape cross section, thereby presenting conical surfaces on opposite sides of the center of the stream for the deflection of the water. The angle of deflection is progressively changed during the rotation of the wheel on its eccentric axis from substantial parallelism to the axis of the stream to the peripheral angle in a radial plane of the wheel. Thus the angle of spread of the stream is correspondingly changed while the throw of the stream is progressively increased and diminished inversely to the angle of spray.

While I prefer the construction having the V-shaped peripheral cross section in the wheel, the wheel may be formed with a notched periphery as illustrated in Figure 3. This will not, however, be of as uniform a distribution over the area as the construction previously described.

What I claim as my invention is:

1. A sprinkler comprising a nozzle for the discharge of the liquid stream and a revoluble disk or wheel eccentrically mounted on said nozzle in the plane of said stream, the periphery of said disk or wheel being of V-shaped cross section, the minor radius of the wheel substantially clearing the stream and the major radius extending across and beyond the stream to progressively increase and decrease the angle of deflection.

2. A sprinkler comprising a nozzle for the discharge of the liquid stream, a revoluble member mounted on said nozzle in the plane of the stream and above the same, said member having an eccentric peripheral cutting portion which extends into the path of the stream once in each revolution thereof.

3. A sprinkler comprising a nozzle for the discharge of the liquid stream, a revoluble

member eccentrically mounted on said nozzle and having a peripheral cutting portion in a non-horizontal plane of the stream and in a position of rest held by gravity in the path of the stream, said member during its revolution forming alternate obstructed and unobstructed portions of the stream.

In testimony whereof I affix my signature.

ALFORD S. LYNDON.