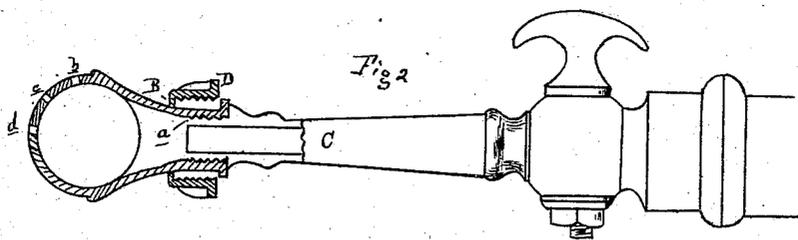
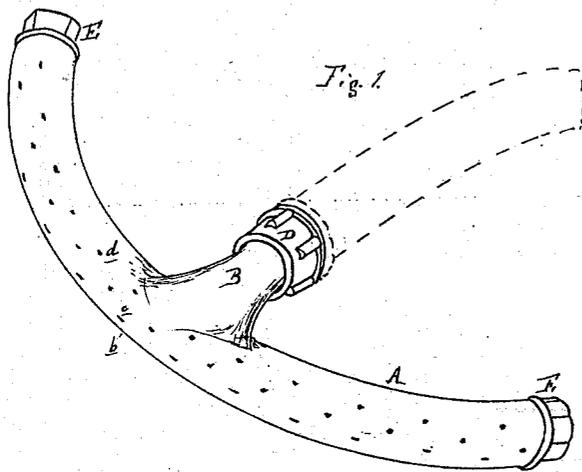


(No Model.)

H. BONNINGHAUSEN.  
LAWN SPRINKLER.

No. 273,940.

Patented Mar. 13, 1883.



Artist:  
*W. S. Sprague*  
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Inventor:  
Hugo Bonninghausen.  
By *W. S. Sprague*  
Atty.

# UNITED STATES PATENT OFFICE.

HUGO BONNINGHAUSEN, OF DETROIT, MICHIGAN.

## LAWN-SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 273,940, dated March 13, 1883.

Application filed August 2, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, HUGO BONNINGHAUSEN, of Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Lawn-Sprinklers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

The nature of this invention relates to certain new and useful improvements in the construction and operation of lawn-sprinklers, adapted to be used with the ordinary garden-hose, either by being coupled directly thereto or to the nozzle with which such hose may be provided.

In all sprinklers of this character they are so constructed that the water passing through them is thrown in all directions, so that when it is desired to change its position it can only be done (without wetting the operator) by cutting off the supply, and after the change is made letting the supply on again. In addition to this, the ground in the vicinity has become so wet that the feet of the operator are wet.

The object of the invention is this, therefore, to so construct the sprinkler that it will only throw the water in advance of its position, leaving the ground in its rear dry, and enabling the operator to change its position, as required, without danger of having his clothing or person wet.

The invention consists in the peculiar construction of the sprinkler, and in the means for attaching the same to the hose or to the nozzle, and the combination of the various parts, as more fully hereinafter described.

Figure 1 is a perspective view of my improved sprinkler attached to a section of garden-hose. The view shows the device bottom upward. Fig. 2 is a vertical cross-section, showing the device attached to a hose-nozzle.

In the accompanying drawings, which form a part of this specification, A represents a piece of curved pipe, which may be made of lead or other suitable material, provided with a short branch, B, communicating with the bore of the pipe A. This branch is interiorly threaded, as shown at *a* in Fig. 2, to engage with the nozzle C, and this branch is also pro-

vided with one-half of a screw-coupling, D, to engage with a similar half of a coupling on the end of the garden-hose. The ends of the curved sprinkler-pipe A are provided with removable caps or stops E, the removal of which will allow the interior of the device to be flushed and easily cleaned should the orifices therein become clogged. In order to fully understand the description, we will call the convex surface of the sprinkler-pipe the "front," and a little in front of the axial line of such pipe there is a series of holes, *b*, designed to throw jets of water a little front of a vertical line, so that the water will fall in front of the device. A little way below there is another series of holes, *c*, designed to throw the water to the front at an angle of forty-five degrees, and below that series there is another series of holes, *d*, designed to throw the jets of water slightly above a horizontal plane.

It will be seen that from this construction and operation of a sprinkler it may be carried to the far end of a lawn to be treated, and, gradually, by pulling on the hose, drawn backward, sprinkling the ground in front of it without danger of wetting either the foot, clothing, or person of the operator.

If preferred, the branch may be extended to any desired length, with its fore end provided with means, as desired, for its attachment to the hose.

What I claim as my invention is—

1. A lawn-sprinkler made of curved pipe, adapted to be attached to a garden-hose and throw jets of water in advance of its position, substantially as described.

2. A lawn-sprinkler made of a section of curved pipe, provided with means for attachment to a garden-hose, and with capped ends, substantially as and for the purposes set forth.

3. A lawn-sprinkler made of a section of curved pipe, provided with holes adapted to throw water in jets in advance of the position of the pipe, and provided with means for connecting the same with a garden-hose or with a garden-hose nozzle, as desired, substantially as set forth.

HUGO BONNINGHAUSEN.

Witnesses:

H. S. SPRAGUE,  
T. SHERMAN.