No. 671,958. Patented Apr. 16, 1901.

C. H. HAVARD & C. O. KINN.

LAWN SPRINKLER.

(Application filed June 25, 1898.)

(No Model.)

Fig. 1

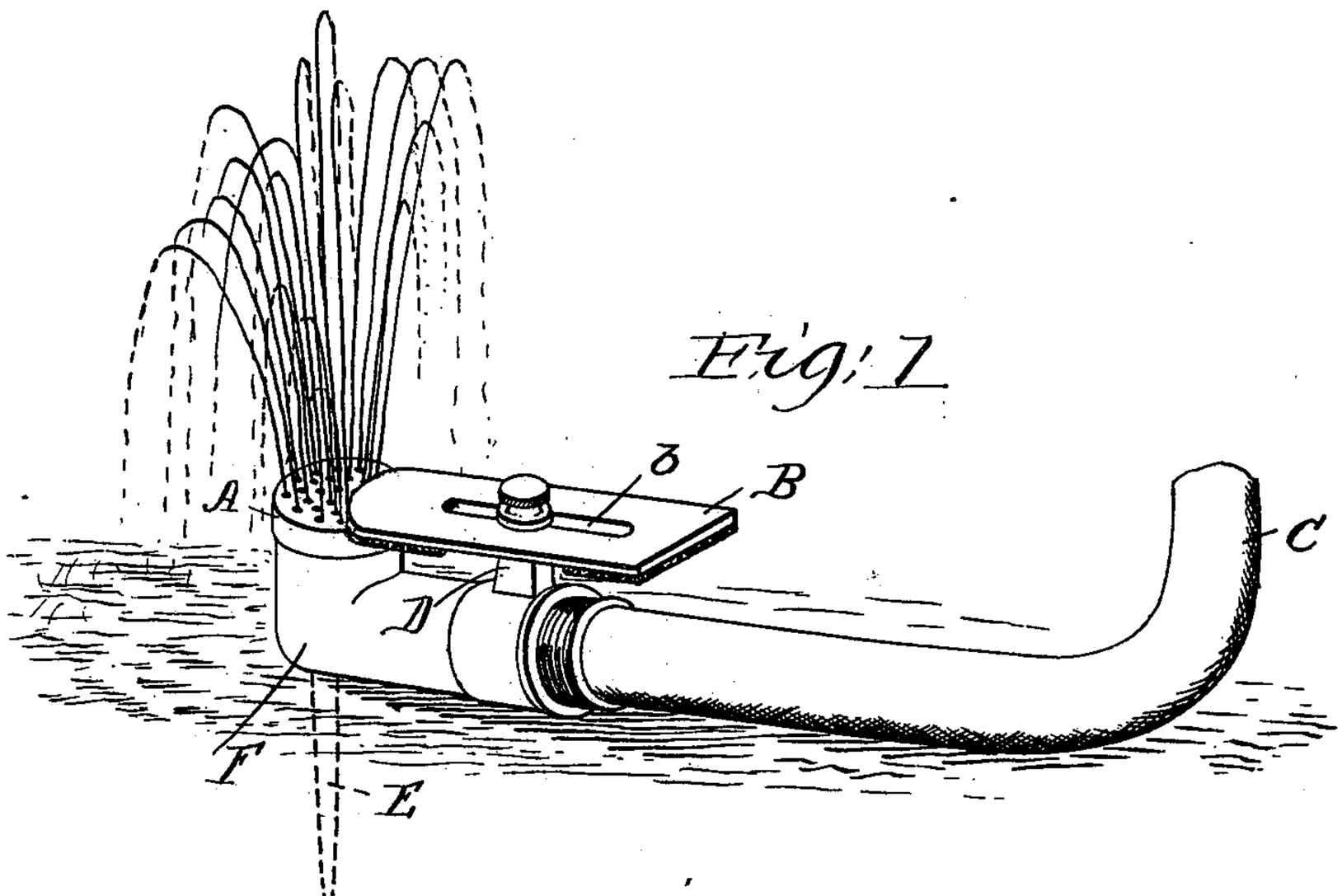


Fig. 2

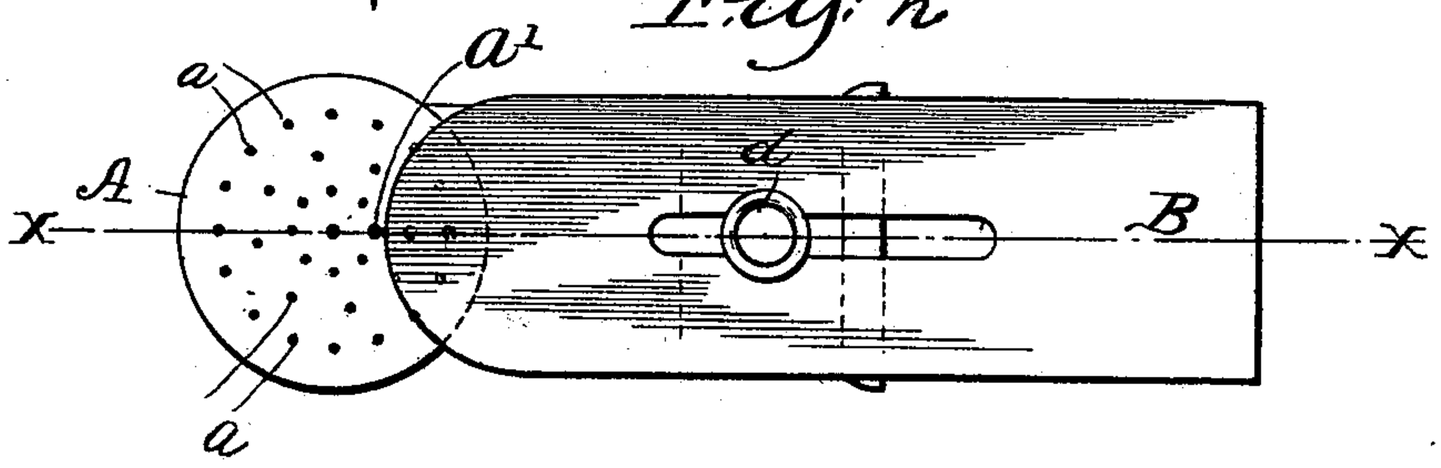
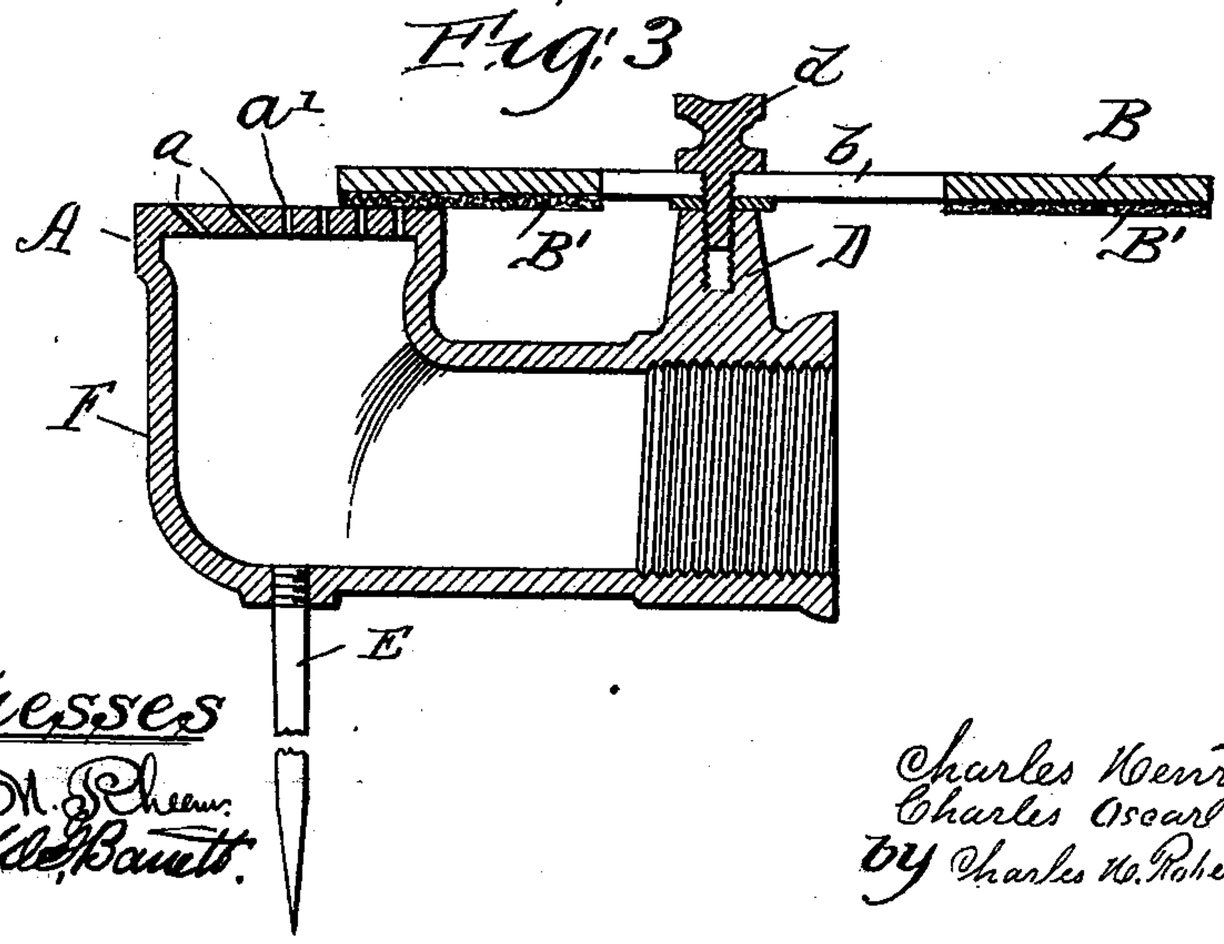


Fig. 3



Witnesses

Wm. M. Cheem.

Harold E. Barnett.

Inventors

Charles Henry Havard

Charles Oscar Kinn

by Charles H. Roberts

Atty

UNITED STATES PATENT OFFICE.

CHARLES HENRY HAVARD AND CHARLES OSCAR KINN, OF CHICAGO, ILLINOIS.

LAWN-SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 671,958, dated April 16, 1901.

Application filed June 25, 1898. Serial No. 684,517. (No model.)

To all whom it may concern:

Be it known that we, CHARLES HENRY HAVARD and CHARLES OSCAR KINN, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Lawn-Sprinkler, of which the following is a specification.

Our invention relates to lawn-sprinklers; and the object of our invention is to produce a lawn-sprinkler wherein a portion of the field of operation of the sprinkler can be optionally kept free while the remaining portion is receiving the spray from the device. We attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of our device, showing the sprinkler in operation with the check-plate applied. Fig. 2 is a plan showing the spacing of the perforations of the rose. Fig. 3 is a central longitudinal section on the line X X of Fig. 2, showing the field of the rose-head perforated at different angles to its face.

Similar letters refer to similar parts throughout the several views.

By the sprinkling devices now in use the sprinklers throw the spray with a general equality over a surface which usually includes the fastening part by which the device is held to or rests upon the ground. It is therefore difficult for the operator who wishes to change the sprinkler to another field or sprinkling-point to do so without getting wet in running under the spray to detach the sprinkler and carry it to another point. To remedy this defect, we provide a check-plate for the rose of the sprinkler, by means of which we can optionally cut out of the surface of the rose any desired portion to protect a corresponding portion of the field of operation of the sprinkler. To the better secure this result, we provide a rose having, preferably, a flat or level top and pierce this top with holes at an angle of substantially forty-five degrees with the face of the rose. The center hole of the rose and all holes between it and the margin on a line to the supporting-post D are made vertical, as shown in Fig. 3, in order that the operator may be protected when for any reason the check-plate is entirely off. This also provides for a flow of water without danger to the operator when the check-plate cuts out but a small piece of the field of the rose.

In our sprinkler the holes are slanted at various angles and are so arranged that the streams of water thus ejected do not fuse with each other, but each stream retains its identity until it reaches its destination or breaks into a spray. The rose of our sprinkler is of circular description, having a central hole which is not slanted and three rows of slanted holes, equally distanced from each other. All the holes in these rows are slanted except the first hole of each row. These holes are vertical and, including the central hole, are directly in line. The object of these straight holes is to prevent the operator from getting wet when removing the sprinkler from one place to another while the water is being ejected over a surface of about twenty-five feet at about twenty-two pounds water-pressure. The outside row of holes is slanted at more than forty-five degrees to allow the water to spread over the aforesaid space, thus watering in a large circle, the jets of water naturally breaking into sprays before touching the ground and watering a surface of less than five feet in thickness (width) constituting the outside of aforesaid circle, which is incomplete because there is a section of about four feet extracted from it along the hose to allow a passage-way to admit the operator. The next row of holes is slanted at a less degree than the outside row of holes in order to water less than five feet more of the surface inside the circle described or formed by the outside row, and the same as the outside circle has a section extracted along the feed-pipe or hose to allow the operator to pass to the sprinkler. The next row of holes is slanted at a still less degree than the other two rows and is substantially the same, except the remaining space inside the circle is watered by it and also has a small section extracted for the same purpose named. The four straight holes—*i. e.*, the central hole and the other three which are in line with it and are also in line with the middle of the sprinkler—are used to wet the sprinkler itself, be-

cause the jets of water rise directly upward and fall down again almost in the same place they started from, thus forming a splash.

In the drawings, A represents the rose, having holes *a* and *a'*, and B is the check-plate, seated upon the post D on the sprinkler F and secured to D by the nut *d*, passing through the slot *b*.

B' is a padded surface of rubber, felt, or the like by which the holes of the rose may be more securely stopped.

Any desired shape may be adopted for the check-plate B, but we prefer the shape shown in the drawings, which may be reversed and the angling corners of the plate used to cut out with precision a quarter of (or the whole end may be used to cut out half of) the field and either end may be used to stop the entire face of the sprinkler when this is desired for any reason, as to save walking to the hydrant to stop the entire flow.

The post D is not important except to raise the check-plate to the level of the rose, and the plate may be fastened directly upon the sprinkler.

The post E is a well-known device for holding the sprinkler in position.

While to allow a more easy adjustment of the check-plate we adopt the level rose, requiring angling perforations, it is obvious that our device may be applied to the ordinary bulging form of rose where the perforation is perpendicular to the rose-surface, and the angles of the sprays of water are secured by the bulging shape of the rose-surface itself by simply shaping and adjusting the check-plate to advance and fit over a bulging form. Also instead of an angle of forty-five degrees any desired sprinkling angle may be used for the perforations and any desired spacing may be used for the rose, and the device may be used without the vertical holes; but we prefer the device as illustrated in the drawings.

What we desire to secure by Letters Patent is—

1. The combination in a lawn-sprinkler of the rose A, check-plate B, and post D, substantially as described and shown.

2. In a lawn-sprinkler the combination of a rose having perforations, with an extensible and retractable check-plate adapted to be moved over the perforations of the rose, and fastened, to cut out portions thereof, and means for locking or fastening said check-plate in position.

3. The combination in a lawn-sprinkler of a rose having circular rows of slanted holes, and a line of vertical holes reaching from the center to the circumference of the rose and the check-plate, B, substantially as described and shown.

4. The combination in the stationary and horizontal rose of a lawn-sprinkler of two or more rows of slanted holes surrounding a vertically-perforated central hole, and a line or row of vertically-perforated holes reaching from the center of the rose outward to its circumference substantially as described and shown and for the purpose specified.

5. In a lawn-sprinkler a stationary rose in a substantially horizontal plane, said rose being provided with slanting holes to disperse or spread the jets, and having a section cut out, or excepted, to protect the operator, substantially as described and shown.

6. In a lawn-sprinkler, the combination of a stationary rose in a substantially horizontal plane, having circles of slanted holes encircling a central unslanted hole, with an extensible and retractable check-plate adapted to be moved over the holes of the rose to cut out portions thereof, substantially as described and shown.

7. In a lawn-sprinkler, a stationary rose in a substantially horizontal plane, said rose being provided with slanting holes to disperse or spread the jets and an extensible and retractable check-plate adapted to be moved over the perforations of the rose to cut out portions thereof, substantially as described and shown.

In testimony whereof we affix our signatures in presence of two witnesses.

CHARLES HENRY HAVARD.
CHARLES OSCAR KINN.

Witnesses:
W. P. QUINBY,
GEO. MILLS ROGERS.