

A. GERDUM.
LAWN SPRINKLER.

(Application filed Jan. 21, 1901.)

(No Model.)

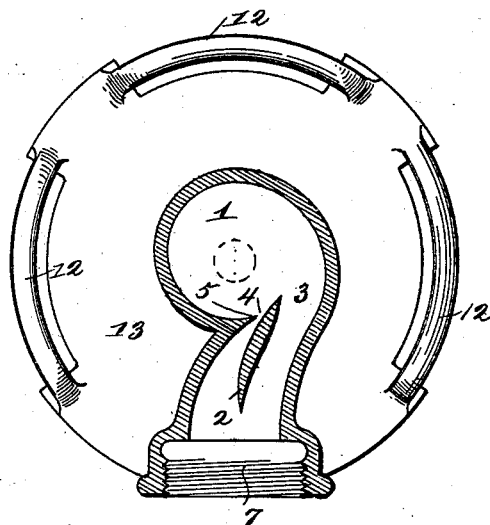


Fig. 1

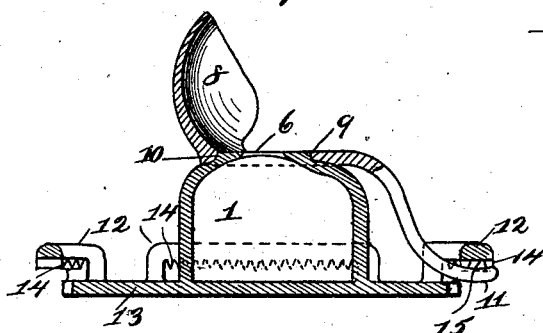


Fig. 2

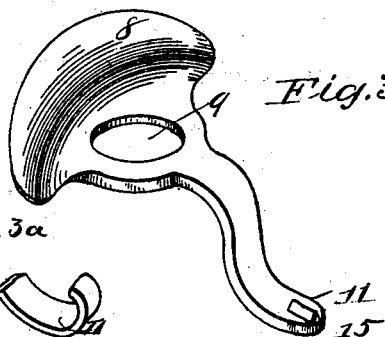


Fig. 3

Fig. 3a



Witnesses
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UNITED STATES PATENT OFFICE.

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LAWN-SPRINKLER

SPECIFICATION forming part of Letters Patent No. 676,186, dated June 11, 1901.

Application filed January 21, 1901. Serial No. 44,140. (No model.)

To all whom it may concern:

Be it known that I, ALBERT GERDUM, a citizen of the United States, and a resident of Cleveland, county of Cuyahoga, State of Ohio, have invented certain new and useful Improvements in Lawn-Sprinklers, of which I hereby declare the following to be a full, clear, and exact description, 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; and the invention is designed to throw a circular fan-shaped spray or inverted cone of great thinness at the center, which breaks at the margin into very minute particles. The spray is also thrown out of the sprinkler at a high speed of rotation.

My invention also has reference to means for controlling the projection of the spray to one side of the sprinkler or the other.

In the views, Figure 1 is a plan view of the device in horizontal section. Fig. 2 is a vertical elevation in transverse central section. Fig. 3 is a separate view of the shield which guides the spray. Fig. 3^a shows a hook upon the end of the depending foot of the shield.

In the views, 1 is a chamber, the walls of which are a flat spiral in outline, provided with an inlet-passage opening tangentially to the inner line of the spiral, so that the water entering will at once follow the contour of the wall easily. In this opening is placed a partition 2, navicular in section and with its inner edge practically upon the reëntering spiral line. In this manner a constantly-opening passage 3 is left on the outer side of the partition into which the main body of water is introduced into the chamber at a not very greatly increased rate of speed over the hose-stream. On the other side of the partition, however, the passage is greatly reduced in width at 4, between the partition and the extended point 5 of the inner wall of the chamber, the effect of which is to introduce a stream at a high rate of pressure, so as to impinge against the inner side of the outer stream and set it into a violent whirling motion, and it makes its exit at the top of the chamber at the opening 6 in the form of a thin sheet, which is so attenuated at the edges as to be nearly resolved into vapor.

The exterior opening 7 to the inlet-passage is screw-threaded for the insertion of the hose.

At 8 is seen a curved shield, which can be placed where most desirable to throw the water away from one side of the sprinkler, so as to protect a walk or person sitting on the lawn from the water. This shield is provided with an opening 9, which can be sleeved over an annular shoulder 10 about the opening 6, and a depending foot 11 can be set under one of the low rails 12, placed about the margin of the base 13 of the sprinkler. Teeth 14 are shown on the under side of these rails, which a tooth 15 on the foot 11 will engage to retain the shield firmly in place when undergoing the shock of the water.

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

1. The combination with a sprinkler, of a guide for the spray consisting, of a curved shield, and means for supporting it on any side of the sprinkler, consisting of low rails upon the margin of the sprinkler-base, and a depending foot to the shield, adapted for insertion under the rails, substantially as described.

2. Means for securing a shield about the central opening to a sprinkler, consisting of a projecting annular shoulder about the opening, about which the shield is sleeved, raised rails about the margin of the sprinkler-base, provided with notches on their lower edges, and a foot depending from the shield and provided with a tooth adapted to engage the teeth on the rails, substantially as described.

3. In a sprinkler, a spiral chamber provided with a circular opening at the top located at the center of development of the spiral, a tangential fluid-inlet opening to the chamber, and means for giving a violent whirling movement to the entering fluid at the point where it is directed toward said opening, consisting of a second inlet adjacent to said tangential inlet and in continuation of the inner or meeting lines of the spiral walls, the said second inlet being gradually narrowed, substantially as and for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALBERT GERDUM.

Witnesses:

GEO. O. WILLET,
WM. M. MONROE.