

(No Model.)

G. H. NEWELL.
LAWN SPRINKLER.

No. 567,916.

Patented Sept. 15, 1896.

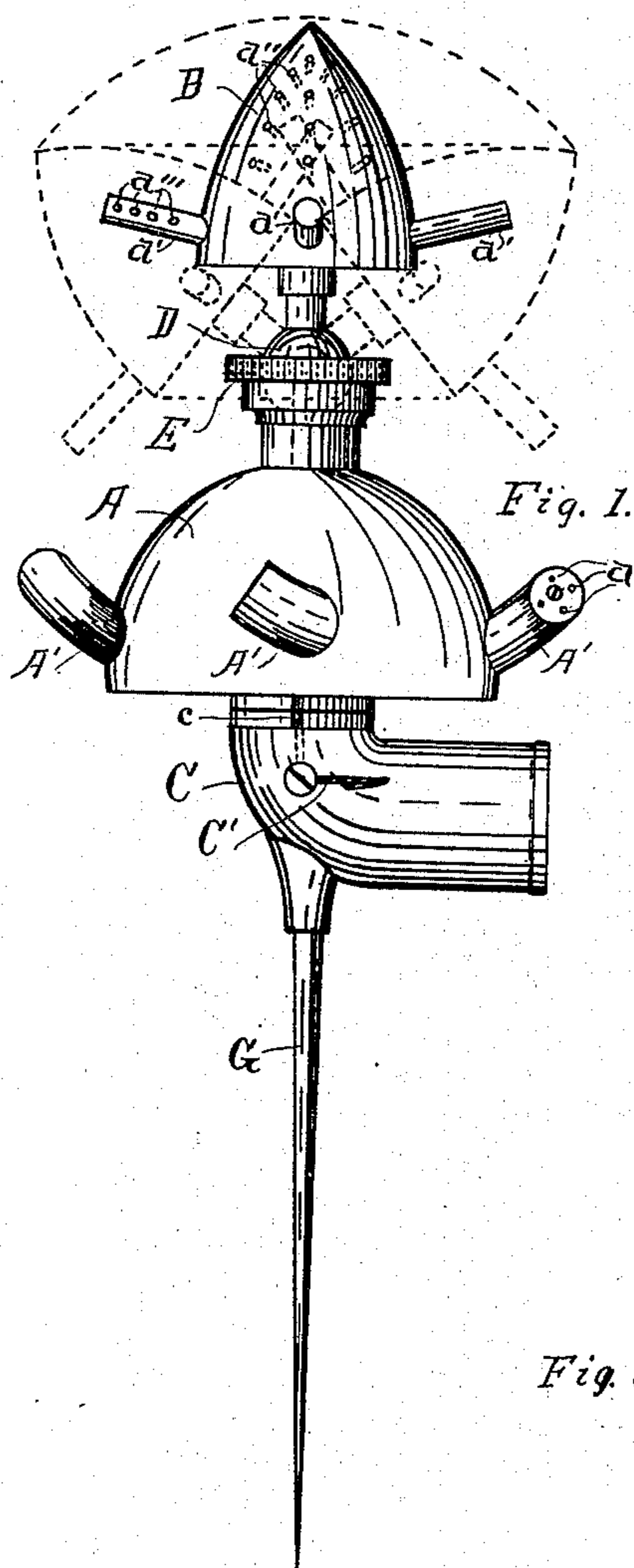


Fig. 1.

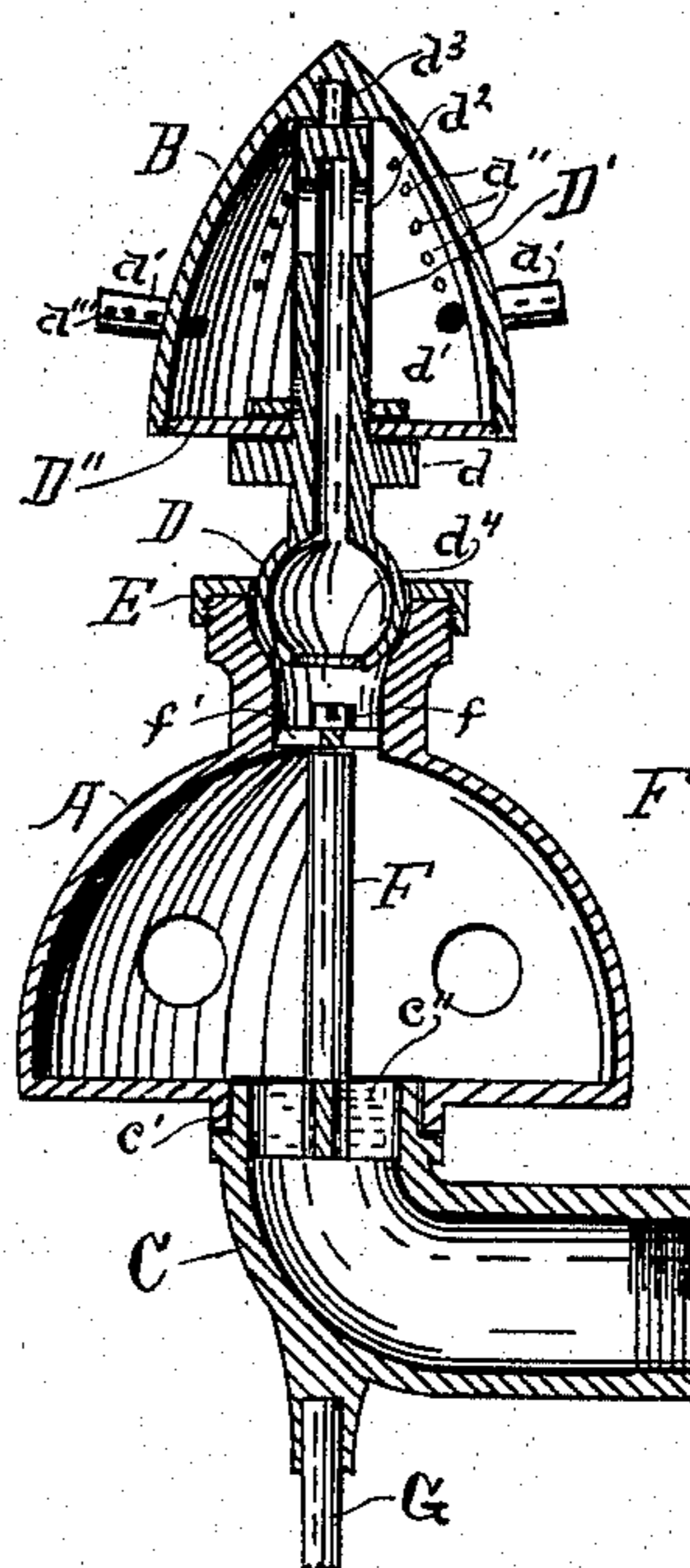


Fig. 2.

Fig. 3.

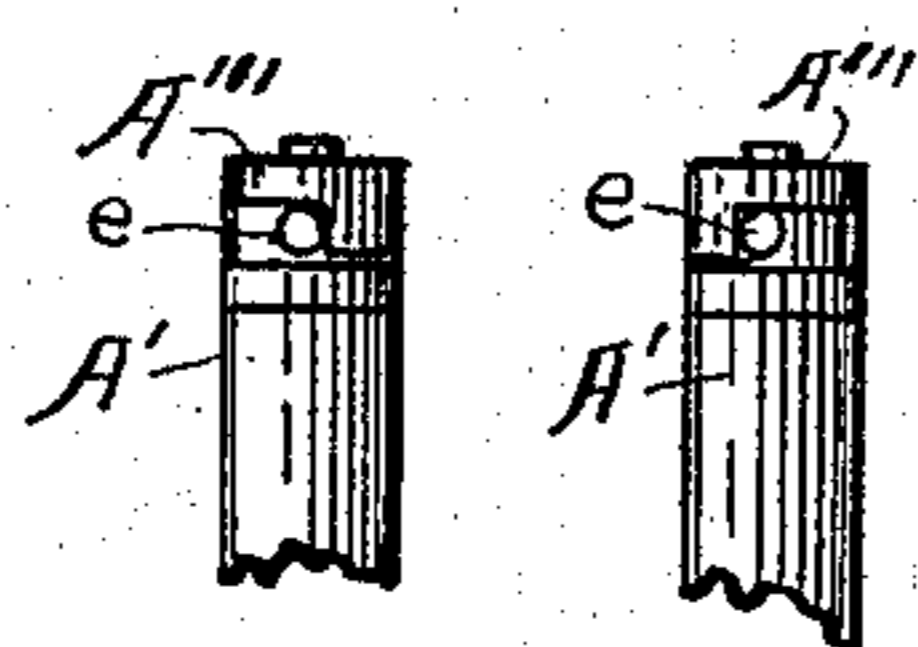
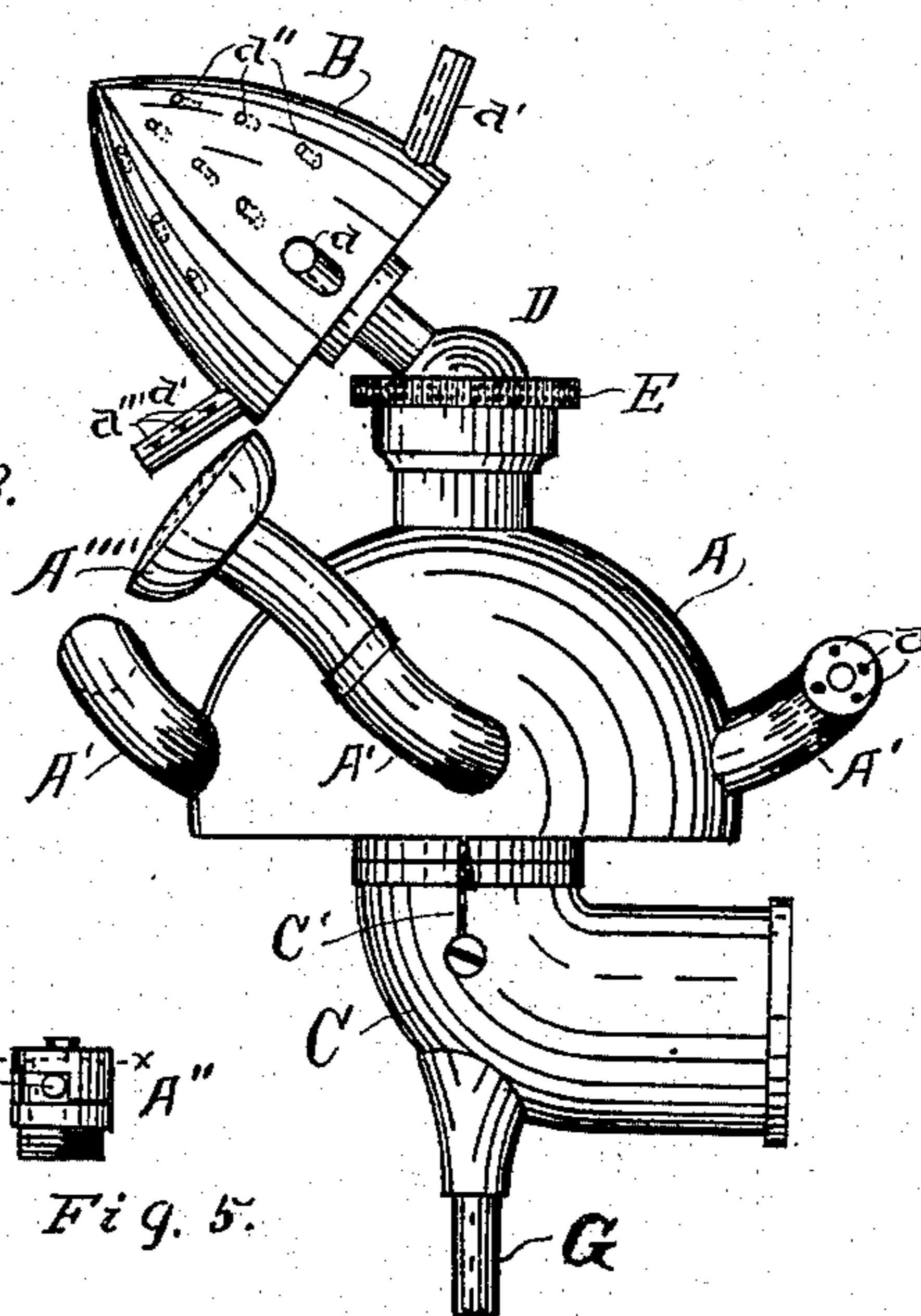


Fig. 4.

Fig. 5.



Fig. 6.

Witnesses.

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GEORGE H. NEWELL, OF GRAND RAPIDS, MICHIGAN.

LAWN-SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 567,916, dated September 15, 1896.

Application filed July 11, 1895. Serial No. 555,656. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. NEWELL, a citizen of the United States, residing at Grand Rapids, in the State of Michigan, have
5 invented certain new and useful Improvements in Lawn-Sprinklers, of which the following is a specification.

My invention relates to improvements in rotary lawn-sprinklers; and its objects are, first,
10 to provide a lawn-sprinkler in which the upper portion or sprinkler may be thrown over in any desired direction from the perpendicular with the base in its normal or perpendicular position, and, second, to provide
15 a lawn-sprinkler with which sprinkling may be done directly upon the line of a sidewalk or other given line without danger of crossing the same. I accomplish these objects by the mechanism illustrated in the accompanying
20 drawings, in which—

Figure 1 is an elevation of my sprinkler. Fig. 2 is a vertical section of the same. Fig. 3 is an elevation of the same with the upper sprinkling-section thrown over to one side
25 and the lower sprinkling-section locked to place for sprinkling on a given line and an auxiliary sprinkler substituted for the ordinary rotary sprinkler. Fig. 4 is a portion of the arms of the lower section detached to show
30 the manner of opening and closing the holes through which the water is forced when sprinkling, and Fig. 5 is the ordinary sprinkling-head detached. Fig. 6 is a substitute head for the lower chamber.

35 Similar letters refer to similar parts throughout the several views.

In my complete sprinkler I construct a lower semiglobular water-chamber A, supported upon a supply-elbow C, to which it is
40 connected by a water-joint c' and secured with a screw f to turn freely around the standard F. Water enters the chamber A from the supply-pipe C between the arms c'' , that support the standard F, and when the
45 upper section of the sprinkler is attached the wall f' , through which the screw f passes to secure the chamber to the standard F, is made open, as indicated in Fig. 1, so that
50 the water can pass through freely. The chamber A is made to revolve by means of short tubes or arms A', attached to form the

segment of a circle, so that the surface of the outer end will stand upon or nearly upon a radial line from the center of the chamber, and the end is perforated by small holes a ,
55 so that the water is forced through them against the atmosphere at right angles with the radial line that forms the end of each tube, so that the unbalanced pressure within the arms of the water will cause the chamber
60 to revolve rapidly in the usual manner.

The upper sprinkler-chamber B is attached to the lower chamber or base by means of a ball-and-socket joint, the ball D being hollow and having an opening d^4 at the lower
65 surface and a hollow stem D', through which the water may flow freely and escape into the chamber through the openings d^2 . This chamber is secured to the stem D' between the shoulder d and the thumb-screw d' to
70 form a water-joint, and is steadied by means of the bearing d^3 , so that it may revolve freely upon the stem. The head D'' screws into the chamber, so that the whole may be readily attached or removed. This chamber
75 is also provided with short tubes or arms a' , that are punctured with a series of small holes a''' through one side in position so that the escape of water therethrough will cause the chamber to revolve, and when the two
80 chambers are used to revolve in the opposite direction from the lower one; and the chamber is also punctured by a number of small holes, as a'' , for the purpose, first, of more free escape of water, and, second, of producing a
85 more pleasing effect from the intermingling of the numerous jets as they escape.

The ball D is secured to the base by means of a chambered nut E, having its opening formed to exactly fit the globular form of the
90 ball, so that it will sustain a perfect water-joint regardless of the position in which the chamber B is placed, and so that this chamber may be thrown to any angle from the perpendicular to those shown by the dotted
95 lines in Fig. 1 and in any direction.

The ends of the tubes A' are provided with an adjustable cap A''', (see Figs. 4 and 5,) so arranged that they may be thrown in one direction (see the left-hand cut of Fig. 4) and
100 the punctures a will be opened, as in Fig. 3, and to throw or turn them in the other direc-

tion (see the right-hand cut in Fig. 4) and the punctures will be closed, as indicated in Fig. 1, there being a head to the end of the tube on the line $x x$ of Fig. 5, just under the cap, which is punctured to correspond with the punctures a in the cap, and the desired position of the cap is governed by the stop e . The object of this adjustable cap is to enable me to shut off the water from flowing from such tubes as would throw the water beyond a given marginal line, hereinbefore referred to, and this object is further aided by locking the chamber A to place, so that it cannot revolve by means of the latch C', pivoted to the supply-pipe in position so that it may be made to interlock with the notch c upon the base of the chamber, as indicated in Fig. 3. It will be noticed (see Fig. 5) that the ends of the tubes A'' are designed to screw into or out of the tubes, so that they may be replaced by an auxiliary sprinkling end A'''. With this arrangement—to wit, the lower chamber locked to place so it cannot revolve, the ends of all of the tubes A' closed except one, and that one provided with the head A''', and the upper chamber thrown over in the same direction that the sprinkler A''' is placed, as in Fig. 3—the sprinkler may be placed so that it will sprinkle directly upon the line of a sidewalk without danger of sprinkling the walk or pedestrians passing the sprinkler. With the latch C' thrown over to the position indicated in Fig. 1, so that the lower chamber may revolve freely, the upper chamber thrown over to the position shown in Fig. 3, the end A''' replaced with an ordinary end, and the punctures a open in all the tubes, a much larger area of lawn may be sprinkled than when the upper chamber is in its normal position, as in Fig. 1, and the effect is much more pleasing and the sprinkling more thorough.

The sprinkler is anchored to the lawn by forcing the pin G into the ground in the usual manner.

For the purpose of enabling me to use the lower chamber with or without the upper one I provide a second or substitute cap E', (see Fig. 6,) perforated and fitted to replace the bearing-cap E, in which case the upper chamber may be removed and sprinkling done directly through the substitute cap, and if it is desired to use the upper and not the lower chamber, when both are connected, it is simply necessary to close the punctures a by turning the caps A'', as hereinbefore described, when, as a matter of course, the lower

chamber will remain idle while the other revolves.

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

1. In a lawn-sprinkler, a revoluble base having arms arranged to discharge water in a fine spray to revolve the base, a ball-and-socket joint in the upper end of the base, a hollow ball having an opening through its lower surface and fitted to work freely in said joint, a hollow stem communicating with the hollow of said ball and extending up therefrom, lateral openings through the walls of the upper end of said stem, and a sprinkler-head revolubly secured to said stem by a water-joint, substantially as and for the purpose set forth.

2. In a lawn-sprinkler, a water-chamber revolubly attached to a supply-pipe, discharge-tubes extending out from said chamber, perforated ends that may be opened and closed, removably secured to said tubes, an auxiliary sprinkler to replace said ends, and a latch to hold the water-chamber from revolving, substantially as and for the purpose set forth.

3. In a lawn-sprinkler, a supply-pipe having a supporting-pin, a standard projecting up from its center, a water-course around said stem, a sprinkler-chamber revolubly attached to said supply-pipe and secured by a screw through a wall across the chamber, and into the standard, a ball-and-socket joint in the top of said chamber said ball made hollow, said hollow communicating with the chamber, a hollow stem extending up from said hollow ball and having apertures opening into a second chamber, a second chamber revolubly secured to said stem, said stem-thread and provided with a shoulder and nut to form a water-joint for securing said chamber, the head of said chamber screwed to the body thereof, apertures through said chamber, tubes extending from the lower chamber and having apertures through so the water may be forced to revolve the chamber and sprinkle the lawn, and a substitute head for the lower chamber, said head punctured for the escape of water, substantially as and for the purpose set forth.

Signed at Grand Rapids, Michigan, July 6, 1895.

GEORGE H. NEWELL.

In presence of—

I. J. CILLEY,
A. P. COLLAR.