Feb. 9, 1926. 1,571,950

H. S. HUMPHREY

SPRINKLER

Filed Sept. 14, 1922

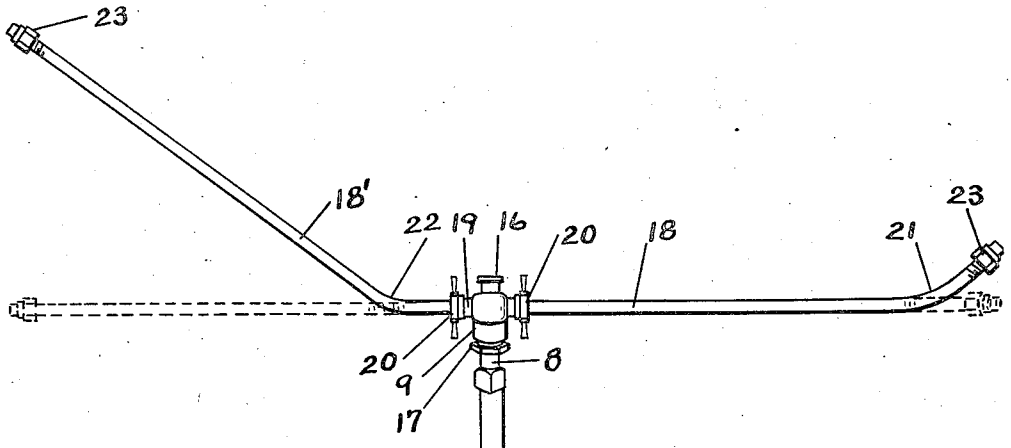


Fig. I.

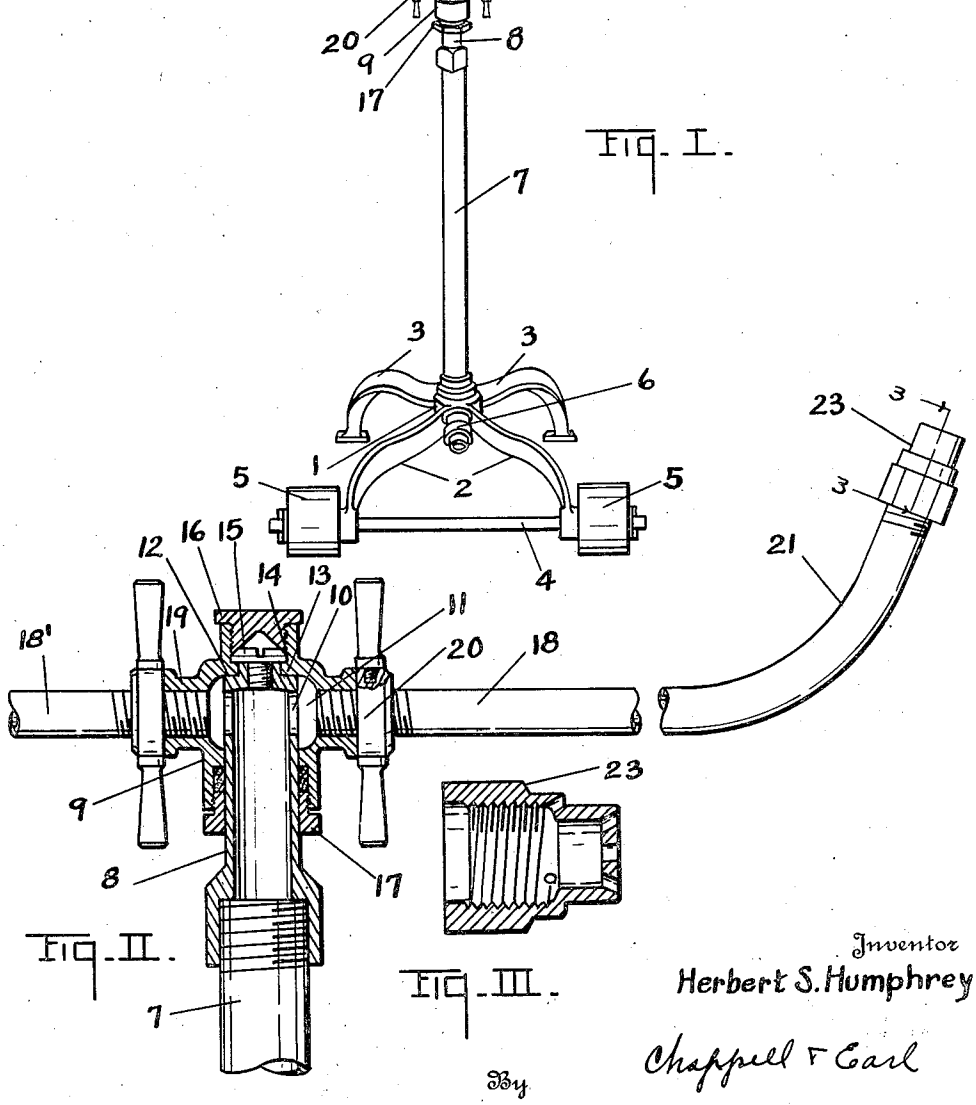


Fig. II.

Fig. III.

Inventor
Herbert S. Humphrey

By Chappell & Earl

Attorneys

Patented Feb. 9, 1926. 1,571,950

UNITED STATES PATENT OFFICE.

HERBERT S. HUMPHREY, OF KALAMAZOO, MICHIGAN.

SPRINKLER.

Application filed September 14, 1922. Serial No. 588,179.

To all whom it may concern:

Be it known that I, HERBERT S. HUMPHREY, a citizen of the United States, residing at the city and county of Kalamazoo, State of Michigan, have invented certain new and useful Improvements in Sprinklers, of which the following is a specification.

This invention relates to improvements in sprinklers.

The main objects of the invention are:

First, to provide an improved sprinkler which is adapted to cover a relatively wide area and one in which the rotating parts are freely rotatable and are not likely to become clogged or inoperative in use.

Second, to provide an improved sprinkler which may be readily adjusted to regulate the speed of its rotation and the throw or the area covered.

Further objects, and objects relating to structural details, will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification. The invention is clearly defined and pointed out in the claims.

A structure which is a preferred embodiment of my invention is clearly illustrated in the accompanying drawing, forming a part of this application, in which:

Fig. I is a perspective view of a sprinkler embodying the features of my invention, the arms being shown in one position by full lines and in another position by dotted lines.

Fig. II is a fragmentary view partially in vertical central section to illustrate structural details.

Fig. III is a longitudinal section through one of the spray nozzles on a line corresponding to line 3—3 of Fig. II.

In the drawing similar reference characters refer to similar parts throughout the several views.

Referring to the drawing, the base 1 is provided with pairs of legs 2 and 3, the legs 2 being front legs and carrying an axle 4 for the wheels 5. The base is provided with a hose connection 6 at the front, the connection being disposed between the legs 2 as indicated. The advantage of this will be later pointed out.

The hollow upright 7 is mounted upon the base and is provided with a spindle 8 at its upper end for the revolving head 9, the spindle being hollow and provided with lateral discharge openings 10, the head having an annular chamber 11 with which these openings communicate. The spindle is provided with a shoulder 12 at its upper end providing a thrust bearing for the head, which has a bearing portion 13 coacting with this thrust bearing. The head has a longitudinal bore 14 at its upper end shouldered to receive the head 15 of a retaining screw tapped into the end of the spindle, the head being thus rotatively retained upon the spindle. The closure 16 is threaded into this bore to seal the same and it also serves as a means for preventing the accidental turning of the screw 15. At its lower end the head is provided with a packing gland 17.

The spray arms 18 and 18′ are threaded into the arm nipples 19 of the head for rotative adjustment therein, the arms being secured in their adjusted positions by the clamping nuts 20 which clamp against the ends of the arms, as shown in Fig. II. The arm 18 is straight except that it has a laterally curved or directed outer end 21, while the arm 18′ is straight except that it is angled at 22 adjacent its inner end. Both arms are provided with spray nozzles 23. By adjusting the arms upon the head the speed of rotation and the throw may be very substantially varied.

By providing the base with the wheels 5 at the front it may be readily dragged along as by means of the hose, the rear legs sliding upon the ground and at the same time providing a substantial anchorage and support for the sprinkler.

By mounting the head as I have described it rotates or turns very freely and at the same time does not leak.

My improved sprinkler is especially designed by me for use in sprinkling large areas, such as large lawns or golf course greens and is very efficient for the purpose; at the same time it is simple and economical in its parts and durable in use and not likely to get out of repair.

Having thus described my invention, what I claim as new and desire to secure by Letters Patents, is:

1. The combination of a base provided with a supply connection, an upright on said base provided with a hollow spindle at its upper end, said spindle being shouldered at its upper end to provide a thrust bearing and having a lateral discharge open-

ing, a sprinkler head rotatable on said spindle and having a chamber embracing said discharge opening thereof and opposed arm nipples open to said chamber, said head having an end bearing engaging said spindle thrust bearing and having a shouldered bore above such bearing, a head retaining screw threaded into the end of said spindle to engage the shoulder of said head, a closure plug for said spindle bore constituting a retaining means for said retaining screw, said head being provided with a packing gland at its lower end embracing the spindle, a pair of arms provided with spray nozzles at their outer ends threaded into said nipples for rotative adjustment therein, the outer end of one of said arms being curved laterally, but being otherwise substantially straight, the other arm being angled adjacent its inner end but otherwise substantially straight, and lock nuts on said arms coacting with said arm nipples whereby the arms may be secured in their adjusted positions.

2. The combination of a base provided with a supply connection, an upright on said base provided with a hollow spindle at its upper end, said spindle being shouldered at its upper end to provide a thrust bearing and having a lateral discharge opening, a sprinkler head rotatable on said spindle and having a chamber embracing said discharge opening thereof, said head having an end bearing engaging said spindle thrust bearing and having a shouldered bore above such bearing, a head retaining screw threaded into the end of said spindle to engage the shoulder of said head, a closure plug for said spindle bore constituting a retaining means for said retaining screw, said head being provided with a packing gland at its lower end embracing the spindle, and spray arms on said head.

3. The combination of a base provided with a supply connection, an upright on said base provided with a hollow spindle at its upper end having a lateral discharge opening, a sprinkler head rotatable on said spindle and having a chamber embracing said discharge opening thereof and opposed arm nipples open to said chamber, a pair of arms provided with spray nozzles at their outer ends threaded into said nipples for rotative adjustment therein, the outer end of one of said arms being curved laterally but being otherwise substantially straight, the other arm being angled adjacent its inner end but otherwise substantially straight, and lock nuts on said arms coacting with said arm nipples whereby the arms may be secured in their adjusted positions.

In witness whereof, I have hereunto set my hand and seal.

HERBERT S. HUMPHREY. [L. S.]