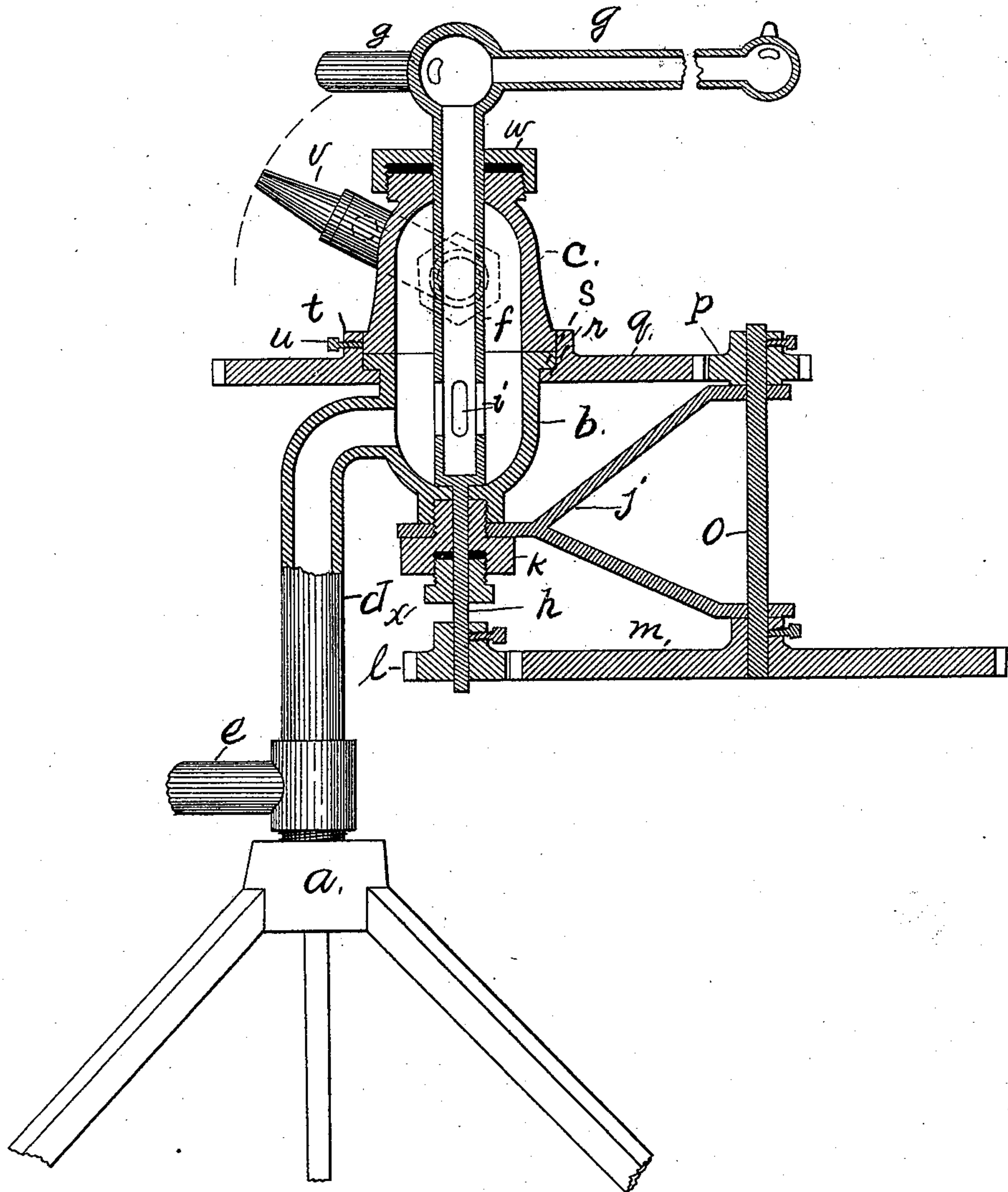


(No Model.)

J. B. FELLOWS.
LAWN SPRINKLER.

No. 534,325.

Patented Feb. 19, 1895.



Witnesses:

Joshua C. Libby
William J. Glendinning

Inventor:

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by
Venill and Clifford
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UNITED STATES PATENT OFFICE.

JEROME B. FELLOWS, OF NORTH CONWAY, NEW HAMPSHIRE.

LAWN-SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 534,325, dated February 19, 1895.

Application filed October 29, 1894. Serial No. 527,134. (No model.)

To all whom it may concern:

Be it known that I, JEROME B. FELLOWS, a citizen of the United States of America, residing at North Conway, in the county of Carroll and State of New Hampshire, have invented certain new and useful Improvements in Lawn-Sprinklers; and I do hereby declare the following to be a full, clear, and exact description of the invention, 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 sprinklers.

It is designed to have one or more series of arms adapted to rotate rapidly, and one or more nozzles operated by the first through intermediate mechanism adapted to rotate at a different rate of speed, said last named arms being made adjustable to throw the water at any desired angle of elevation.

To this end, it consists in a reservoir formed by two bell shaped sections, the lower one stationary and the upper one rotatable thereon, a hollow shaft extending vertically through said reservoir, having on its upper extremity sprinkler arms of any suitable construction and on its lower extremity a pinion meshing with a gear which, through intermediate mechanism, rotates the upper section of said reservoir, said upper section carrying one or more nozzles adjustable vertically.

In the drawing accompanying and forming a part of this application, the figure is a sectional view, partly in elevation, of my improved sprinkler.

In said drawing *a* represents a base, upon which the sprinkler is mounted and *b* and *c* the stationary and rotary sections respectively of the reservoir. The stationary section may be mounted upon said standard in any convenient manner, as for example, by attachment to or made continuous with pipe *d*, into which opens a supply pipe *e*. The rotary section of said reservoir rests upon and is adapted to rotate upon the stationary section in the manner hereinafter described. Passing vertically through said reservoir is a hollow shaft *f* carrying on its top sprinkler arms *g* and on its lower extremity a rod *h* extending down through the bottom of the reservoir.

Within the reservoir the hollow shaft *f* has

ports *i* opening into the reservoir, through which water is supplied to the sprinkler arms at the top. Attached to the stationary section of the reservoir is a bracket *j*. This bracket may be attached in any convenient manner. As shown in the drawing it is held in place by a nut *k* inserted in the bottom of the stationary section of the reservoir.

On the lower extremity of rod *h* is a pinion *l* meshing with a gear *m* keyed upon a vertical shaft *o* mounted in said bracket. On the top of shaft *o* is a pinion *p* meshing with a gear *q* having a flange *r* adapted to rest against a flange *s* near the top of the stationary section of the reservoir. Said last named gear has an upwardly extending flange *t* which extends above the bottom of the rotary section of the reservoir, and said last named gear is rigidly keyed to said rotary section of the reservoir by one or more set screws *u* or in any other convenient manner, so that said section rotates with said gear. Pivotaly mounted in said rotary section of the reservoir are one or more nozzles *v*, said nozzles being adapted to rotate in a vertical plane to throw the water at any desired angle, and to rotate with said rotary section of the reservoir.

A packing nut *w* prevents the escape of water from the reservoir at the top, and a packing nut *x* serves the same function at the bottom.

The operation of my improved sprinkler is as follows:—Water under pressure is introduced into the reservoir through supply pipe *e* and pipe *d*. It thence passes through ports *i* into shaft *f* and thence to the sprinkler arms on the top of said pipe. It also enters the nozzles *v* direct from the reservoir. The water escaping from the sprinkler arms causes the shaft to rotate, and the rotation of said shaft through the pinion on the end of rod *h* and the intermediate system of gears causes the rotary section of the reservoir to revolve at a rate of speed determined by the gearing. As here constructed, the rotary speed of the nozzles is much less rapid than that of the rotary arms.

The advantage of my improved sprinkler is that a much greater area can be sprinkled thoroughly by the combination of the sprinkler arms and the nozzles rotating at different

speeds, the nozzles throwing the water much farther than the sprinkler arms. Again the nozzles may be adjusted vertically to throw the water at different elevations, the throw
5 of the water depending more or less upon the elevation at which it is thrown and upon the rate at which the nozzles are being rotated.

Having thus described my invention and its use, I claim—

10 1. In a sprinkler, in combination two sets of sprinkler arms rotating at different speeds, and intermediate mechanism whereby one set of said arms is driven by the other, substantially as and for the purposes set forth.

15 2. In a sprinkler, in combination two sets of rotary sprinkler arms rotating at different speeds, intermediate and connecting mechanism whereby one set of said arms is driven by the other, the driven set capable of vertical
20 adjustment to throw the water at any de-

sired angle, substantially as and for the purposes set forth.

3. In a sprinkler, in combination a reservoir composed of two sections, one stationary and the other rotatable thereon, a vertical
25 pipe passing through said reservoir and open thereinto, having on its upper end laterally extended sprinkler arms and on its lower extremity a pinion and intermediate mechanism connecting said pinion and said rotatable
30 sections, said upper section carrying one or more nozzles, substantially as and for the purposes set forth.

In testimony whereof I affix my signature, in presence of two witnesses, this 19th day of
35 October, 1894.

JEROME B. FELLOWS.

Witnesses:

ELGIN C. VERRILL,
NATHAN CLIFFORD.