(No Model.) 2 Sheets—Sheet 1.

# E. A. WHITE.

## LAWN SPRINKLER.

No. 588,846. Patented Aug. 24, 1897.

Fig. 2.

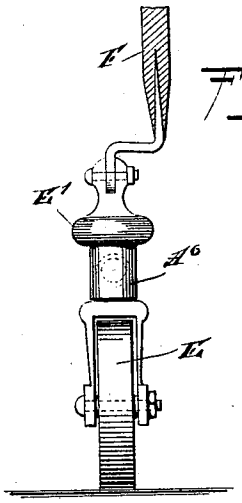



Fig. 1.




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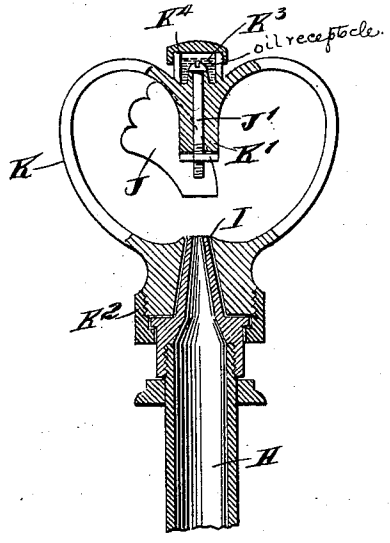
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# E. A. WHITE.

## LAWN SPRINKLER.

No. 588,846. Patented Aug. 24, 1897.

Fig. 4.



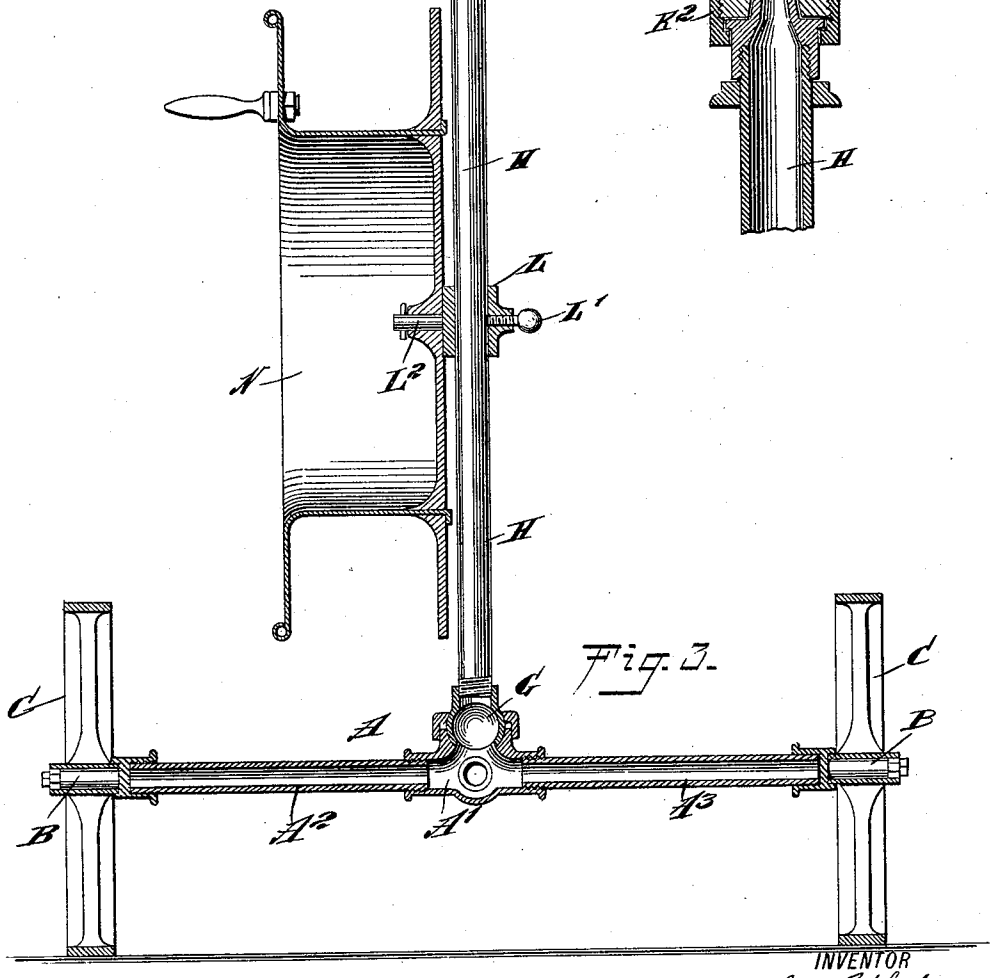




Fig. 3.

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# UNITED STATES PATENT OFFICE.

ENOCH ALLEN WHITE, OF HAILEY, IDAHO.

## LAWN-SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 588,846, dated August 24, 1897.

Application filed October 24, 1896. Serial No. 609,881. (No model.)

*To all whom it may concern:*

Be it known that I, ENOCH ALLEN WHITE, of Hailey, in the county of Blaine and State of Idaho, have invented a new and Improved Lawn-Sprinkler, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved lawn-sprinkler which is simple and durable in construction, arranged for conveniently moving it about to any desired place, and to properly sprinkle a large area of ground at one time.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation of the improvement. Fig. 2 is a front elevation of the steering-wheel and handle. Fig. 3 is a transverse section of the improvement on the line 3 3 of Fig. 1, and Fig. 4 is an enlarged sectional side elevation of the double sprinkling-head.

The lawn-sprinkler is mounted on a carriage having a frame A, formed with a five-way casting A′, from which extend transversely the tubes $A^2$ $A^3$, supporting at their closed ends the axles B for the main wheels C. From the casting A′ extends rearwardly a supply pipe or tube $A^4$, connected at its outer end with a trap or seal D, provided with two nipples D′ $D^2$, to either of which the hose is attached, the other nipple being closed by a cap $D^3$. From the casting A′ extends forwardly a tube $A^5$, supporting at its closed end the steering-head $A^6$ for the fork E′ of the steering-wheel E, the said fork being connected at its upper end with a handle F for conveniently drawing the carriage over the ground to the desired place and at the same time permitting of turning the fork E′ to properly steer the carriage.

The top of the casting A′ is connected by a ball-and-socket joint G with a stand-pipe H, carrying at its upper end a nozzle I, discharging upon one or more propeller-blades J, secured on the lower end of a pin J′, mounted to turn in a central bearing or socket K′, formed on a yoke or bow K, held to turn by a coupling $K^2$ on the nozzle I, as is plainly indicated in Fig. 4. The top of the bearing K′ is formed with an oil-receptacle $K^3$, closed by a cap $K^4$ and containing oil for lubricating the pin J′, on which the propeller-blades J are mounted.

Now it will be seen that when the water is turned on it passes through the hose to the trap or seal D and through the same into the supply-pipe $A^4$ and finally passes into the casting A′ and partly into the several tubes $A^2$ $A^3$ $A^5$ to compress the air therein, as there is no outlet for the air from the outer ends of the said tubes. The water also passes through the ball-and-socket joint G up through the stand-pipe H and the nozzle I, the latter discharging the water upon the propeller-blades J, so as to rotate the same. The rotary motion given to the propeller-blades causes a revolving of the yoke K, but at a comparatively low rate of speed, so that the water discharged by the nozzle is properly distributed over a large area without danger of leaving parts unsprinkled, which would be the case if the yoke K were stationary.

By the arrangement described the compressed air in the tubes $A^2$ $A^3$ $A^5$ acts as a cushion upon the water passed into the sprinkler and as a governor for the same, so that a uniform sprinkling takes place at all times, even if the pressure of the water should vary. The sprinkler can be drawn to any desired place by the operator taking hold of the handle F and pulling thereon.

On the stand-pipe H is secured a collar L by means of a set-screw L′, and this collar carries a stud $L^2$, on which the hose-reel N is journaled. The hose wound on the reel N has one end connected with the inlet to the trap or seal D and the other end extends to the water-supply.

Now when it is desired to move the sprinkler back from a sprinkled place it is necessary for the operator to pull upon the unwound hose, so that the carriage is drawn backward to a dry spot and without the operator being compelled to walk on the wet grass or get near the water issuing from the sprinkler. By having the trap or seal D at the inlet or supply pipe $A^4$, I am enabled to properly drain the hose whenever desired.

The ball-and-socket joint G permits of setting the stand-pipe to any desired angle to make the device specially serviceable for various purposes, as for sprinkling terraces, uneven lawns, &c., for washing trees, shrubs, and the like.

The propeller-blades J may be rigidly secured to the bow or yoke K by screwing up on the pin J', so that the yoke is revolved by the action of the water and the propeller-blades turn with the yoke.

By having the trap or seal D the water is retained in the stand-pipe H after the supply is shut off, and hence no water is wasted and the sprinkler begins to work again immediately after the water is turned on. It is understood that the water contained in the trap or seal acts as a check-valve on the water in the sprinkler.

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

1. A lawn-sprinkler, provided with a nozzle, a yoke held to revolve on the end of the said nozzle, and propeller-blades held to revolve on the said yoke, the yoke and propeller-blades being adapted to revolve independently of each other, substantially as described.

2. A lawn-sprinkler provided with a casting connected with the water-supply, a stand-pipe, a ball-and-socket joint for connecting the stand-pipe and casting and a sprinkling-head held on the stand-pipe and provided with a revoluble yoke, and independently-revoluble propeller-blades, the said yoke and propeller-blades revolving at different rates of speed, substantially as described.

3. A lawn-sprinkler, provided with a nozzle, a coupling mounted to turn on the said nozzle, a yoke held on the end of the nozzle and secured to the said coupling to turn therewith, and a propeller-blade having a journal mounted to turn in a bearing on the said yoke, substantially as shown and described.

4. A lawn-sprinkler having a carriage-frame comprising a casting, a stand-pipe connected with the said casting, a water-supply pipe connected with the casting, and tubes also connected with the casting to form compressed-air chambers for the water passing through the sprinkler, substantially as shown and described.

5. A lawn-sprinkler provided with a trap or seal at its inlet or supply pipe, substantially as shown and described.

6. A lawn-sprinkler, provided with a carriage-frame, comprising a five-way casting, tubes extending transversely from the said casting and carrying axles for the said casting, a tube extending forwardly from the casting and carrying at its closed end a steering-head for the steering-wheel, and a stand-pipe connected with the said casting and carrying a sprinkling-head, substantially as shown and described.

7. A lawn-sprinkler, provided with a carriage-frame, comprising a five-way casting, tubes extending transversely from the said casting and carrying axles for the said casting, a tube extending forwardly from the casting and carrying at its closed end a steering-head for the steering-wheel, and a stand-pipe connected with the said casting and carrying a sprinkling-head, the connection between the said stand-pipe and casting being in the form of a ball-and-socket joint, substantially as shown and described.

8. A lawn-sprinkler, having a stand-pipe, a nozzle secured to the stand-pipe, a yoke mounted to turn on the said nozzle, and a propeller-blade journaled on the said yoke and receiving water from the said nozzle, the rotary motion given to the propeller-blade causing a revolving of the said yoke, substantially as described.

9. A lawn-sprinkler provided with a sprinkling-head having a revoluble yoke, a pin mounted to turn in a bearing or socket formed on said yoke, a propeller-blade secured to said pin and an oil-receptacle formed at the top of said bearing and inclosing the upper end of said pin, substantially as described.

10. A lawn-sprinkler having a stand-pipe, a nozzle secured to the stand-pipe, a yoke mounted to turn on the said nozzle, a propeller-blade journaled in a bearing on the said yoke and a receptacle for oil formed at the top of said bearing and communicating therewith, the said receptacle being provided with a closing-cap, substantially as shown and described.

11. A lawn-sprinkler, having a carriage formed partly by tubes connected with the water-supply in the stand-pipe to form compressed-air chambers for the water passing through the sprinkler, and an inlet-pipe for said sprinkler provided with a trap or seal, substantially as shown and described.

12. A lawn-sprinkler, provided with a nozzle, a yoke loosely held on the said nozzle and adapted to be revolved by the action of the water, and a propeller-blade carried by the said yoke, substantially as shown and described.

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