(No Model.)

I. W. McGAFFEY.

LAWN SPRINKLER.

No. 454,288. Patented June 16, 1891.

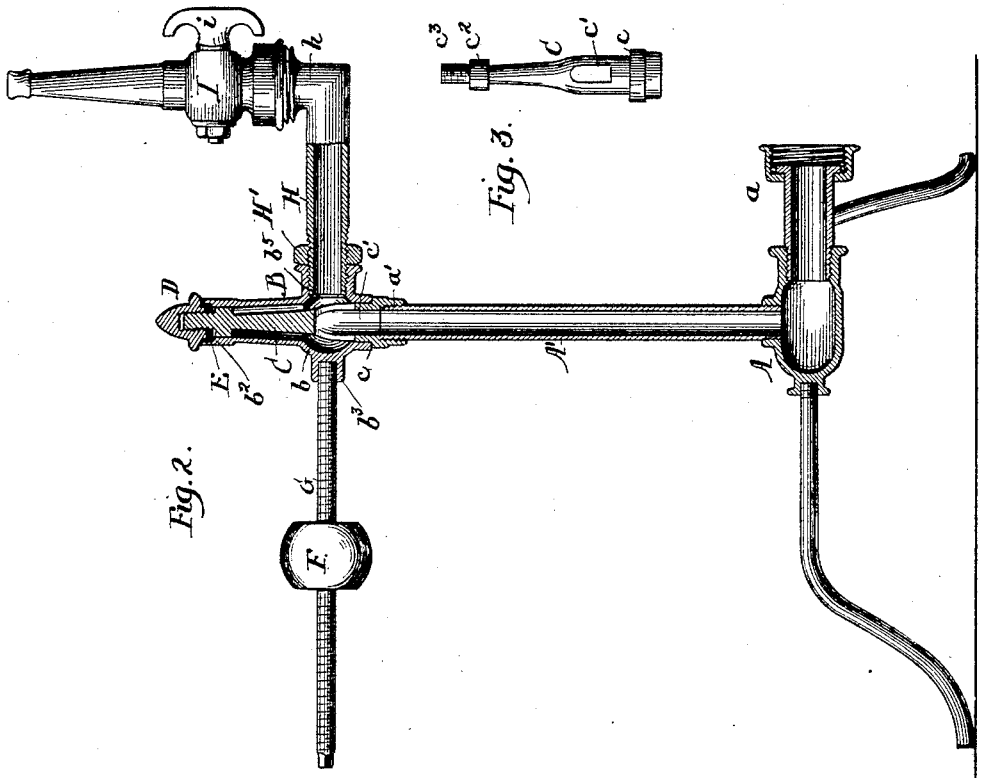

Fig. 2.

Fig. 3.

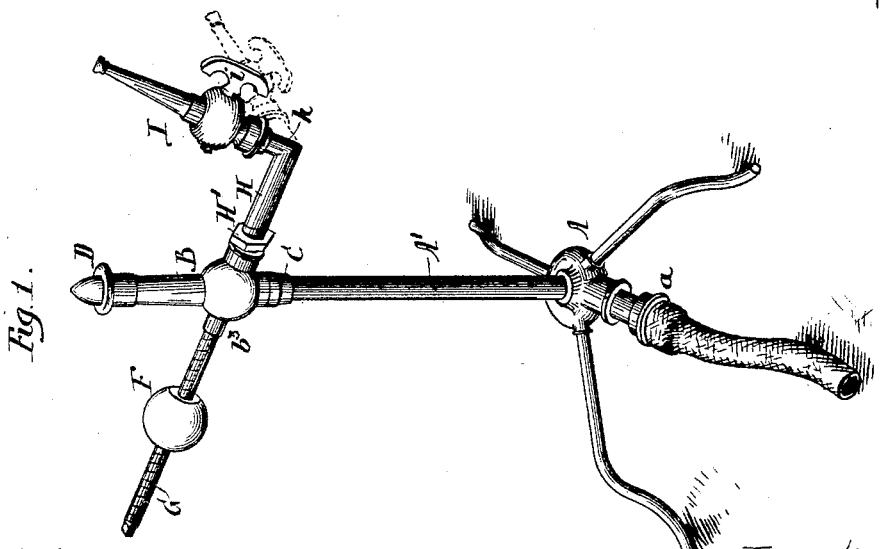

Fig. 1.

Witnesses:
Fred Gerlach
Lute S. Alter

Inventor:
Ivers W. McGaffey
By Penn Fisher
Attorneys.

UNITED STATES PATENT OFFICE.

IVES W. McGAFFEY, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO WILLIAM D. ALLEN, OF SAME PLACE.

LAWN-SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 454,288, dated June 16, 1891.

Application filed December 22, 1890. Serial No. 375,423. (No model.)

To all whom it may concern:

Be it known that I, IVES W. McGAFFEY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Lawn-Sprinklers, of which I do declare the following to be a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

One object of my present invention is to provide a lawn-sprinkler the stand-pipe for which is adapted to be coupled at its base to an ordinary hose-section and is provided with a rotary arm adapted to have coupled thereto the ordinary hose-nozzle, so that when a rotary sprinkler is desired it is only necessary to detach the ordinary nozzle from the hose-section and couple the parts to the appropriate portions of the stand-pipe.

The object of my invention is to provide improved means whereby the adjustment of the nozzle to different positions can be effected in order to vary the direction of the stream, so that the extent of surface over which the stream of water shall be cast may be increased or diminished, as desired.

A still further object of my invention is to improve the joint whereby the rotary coupling is connected with the stand-pipe, so that a compensation for wear can be effected, and thereby a water-tight joint can be better maintained.

With these several objects in view my invention consists in the novel features of construction hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the claims at the end of this specification.

Figure 1 is a perspective view of a sprinkler embodying my invention. Fig. 2 is a view in central vertical section, parts being shown in elevation. Fig. 3 is a detail view of the spindle at the top of the stand-pipe.

A designates a base or standard of suitable construction, the standard shown being provided with a stand-pipe A′, to which water will be delivered through a suitable pipe attached by any convenient form of coupling—as, for example, attached, as at *a*, to the base of the standard. The top of this stand-pipe A′ is suitably adapted for sustaining the rotary coupling B.

In the form of the invention shown the top of the stand-pipe A′ is screw-threaded, as at *a′*, to receive the partially-hollow spindle C, whereon the rotary coupling B is mounted. This spindle C is furnished with an annular shoulder *c*, whereon rests the bottom of the the coupling B, and is furnished with the opening *c′*, through which the supply of water will pass into the chamber *b* of the coupling. The upper portion of the coupling B is of suitable size to receive the upper part of the spindle C, and the upper portion of this spindle is preferably formed with an annular rib or enlargement c^2, that fits snugly within a corresponding bearing in the upper part of the coupling B. The extreme upper end of the spindle C is screw-threaded, as at c^3 to receive a retaining-nut D, that is furnished with a reduced portion adapted to enter the space between the upper end of the coupling B and the upper end of the spindle C. Within this space is placed a packing-ring E, resting upon the annular seat b^2 of the coupling B, this seat being a slight distance above the enlargement c^2 of the spindle. Hence it will be seen that when the rotary coupling B has been placed upon the spindle and the screw D has been turned in such manner as to force the packing-ring E firmly against its seat a tight joint will be maintained at the upper part of the coupling, and it will be seen, also, that as the lower end of the coupling and the rib *c*, whereon it rests becomes more or less worn by long usage the screw D can be tightened, so as to force downwardly the packing-ring E, and thereby compensate for wear.

To one side of the coupling is attached a counterbalance-weight F. One convenient way of attaching this counterbalance-weight is to form the coupling B with a lateral extension or lug b^3, having a screw-threaded socket adapted to receive one end of the threaded rod G, whereon the weight F is carried, this weight being by preference screw-threaded, so that it can be adjusted to any desired position upon the rod.

Upon the side of the coupling opposite the counterbalance-weight is formed the dis-

charge-orifice b^5, the walls of this orifice being preferably screw-threaded to receive the threaded end of a suitable arm or extension H, whereby the nozzle I is carried. This arm or extension H is preferably formed with the angular end *h*, threaded in such manner as to receive the induction end of the nozzle I, that may be of the ordinary "single-stream" type or of any other suitable style. The arm H is preferably furnished upon its threaded portion with a jam-nut H', so that the arm can be adjusted as desired in order to change the position of the nozzle I, and thereby shift the direction of the stream issuing from the nozzle, in order to vary the extent of surface over which the stream of water is to be cast. The extent of surface over which the stream of water will be thrown and the quantity of water used can also be determined by means of a suitable valve *i* in the nozzle I, and by this means also the rapidity of rotation of the coupling B and the nozzle can be modified.

From the foregoing description it will be seen that when it is desired to use my improved sprinkler it is only necessary to attach the hose to the coupling *a* at the base of the standard A and attach the ordinary discharge-nozzle of the hose to the outer end of the nozzle-carrying arm H. The nozzle I will then be adjusted by setting the arm H with respect to the coupling B in such manner as to give the desired direction to the stream, according to the extent of surface to be sprinkled, and the valve *i* will be correspondingly opened. The weight F upon one side of the coupling B will counterbalance the weight of the nozzle I and its connections upon the opposite side of the coupling, so that an easy turning of the coupling upon its bearings can be secured and all excessive friction and unevenness of wear be thereby avoided. It is obvious that when it is desired to throw the stream of water over a very wide surface it is only necessary to shift the nozzle I toward a horizontal position and turn the valve *i* in such manner as to increase the volume of water passing through the nozzle.

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

1. A lawn-sprinkler comprising a suitable stand having at its base a screw-threaded coupling of a size adapted to connect with the ordinary hose-section, a rotary coupling mounted upon said stand and provided with a screw-threaded portion to engage a nozzle-carrying arm, and a nozzle-carrying arm attached to said rotary coupling and extending laterally therefrom, said nozzle-carrying arm having an upturned exteriorly-threaded end corresponding in size to the coupling at the base of the stand, and thereby adapted to be coupled to the ordinary interiorly-threaded hose-nozzle, substantially as described.

2. A lawn-sprinkler comprising a suitable pipe A', provided at its upper end with a spindle C, having one or more openings *c'* therein and having an annular shoulder *c* at its lower end, and having at its upper end an annular rib or enlargement c^2 and a threaded portion, a rotary coupling B, mounted upon said spindle and formed at its upper end with an annular enlarged space having the seat b^2 at its base, and a retaining-nut D, adapted to engage the threaded end of the spindle, said retaining-nut being furnished with a reduced portion adapted to enter the space between the upper end of the coupling B and the upper end of the spindle C, in order to firmly retain a packing-ring upon the annular seat b^2 of the coupling, substantially as described.

IVES W. McGAFFEY.

Witnesses:
GEO. P. FISHER, Jr.,
I. B. CARPENTER.