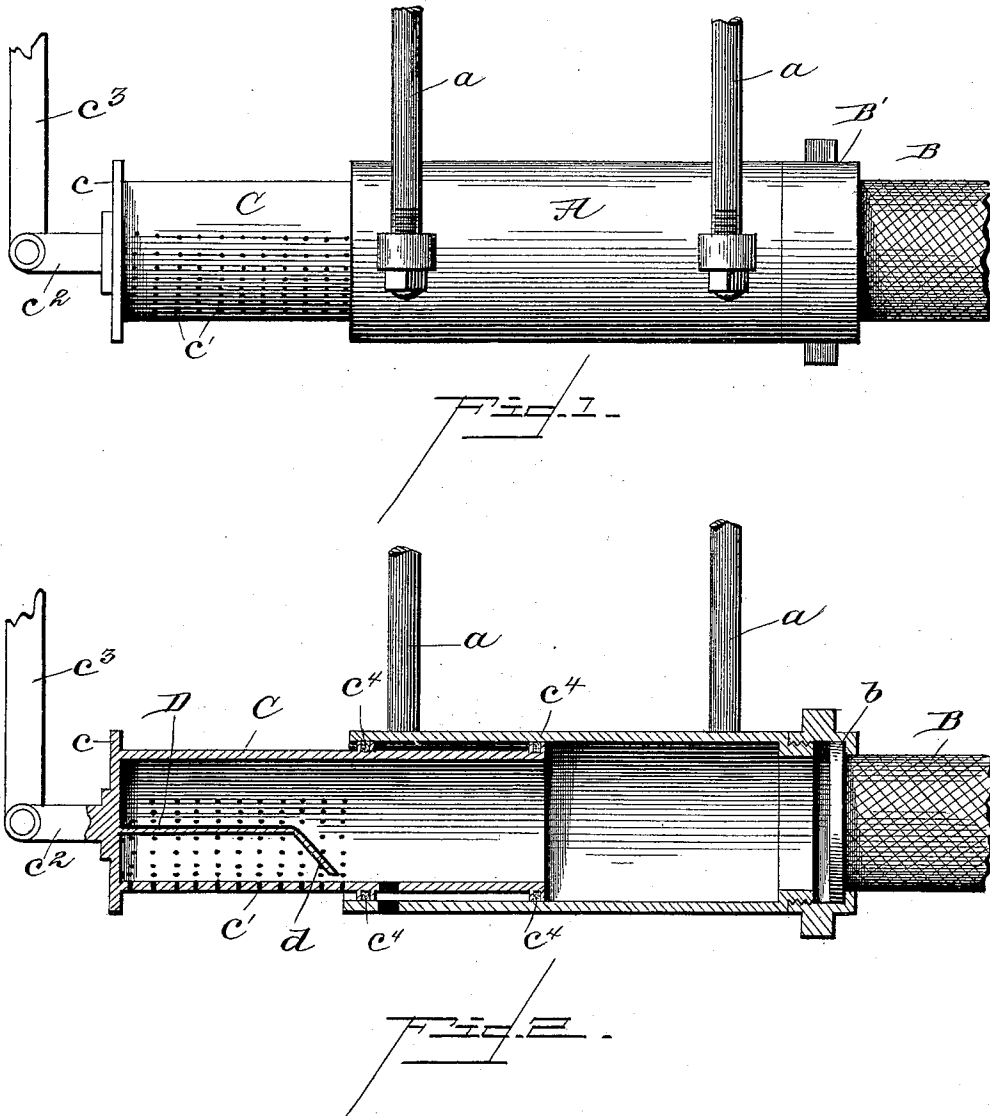


(No Model.)

F. E. BOWMAN.
NOZZLE FOR STREET SPRINKLERS.

No. 464,550.

Patented Dec. 8, 1891.



Witnesses:
Samuel Mead.

F. B. Kiefer

Inventor
Frederick E. Bowman

by A. E. Dyreforth,
his Attorney

UNITED STATES PATENT OFFICE.

FREDERICK E. BOWMAN, OF SOUTH BEND, INDIANA, ASSIGNOR TO THE
MILLER KNOBLOCK WAGON COMPANY, OF SAME PLACE.

NOZZLE FOR STREET-SPRINKLERS.

SPECIFICATION forming part of Letters Patent No. 464,550, dated December 8, 1891.

Application filed May 29, 1891. Serial No. 394,570. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK E. BOWMAN, a citizen of the United States, residing at South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Nozzles for Street-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.

This invention relates to nozzles designed particularly for use on street-sprinklers, though applicable to any use where sprays of water are designed to be projected and where it is desirable that the quantity of the water discharged be under immediate control through an easily and rapidly operated device.

The object of the invention is to produce a nozzle of the simplest possible construction, composed of few parts, easily made, and capable of being rapidly assembled, whereby by a very simple manipulation of a moving part the quantity of water discharged may be regulated.

Furthermore, the object of the invention is to produce a nozzle designed particularly for use on street sprinklers, which shall be of such construction as to require no valve of the ordinary construction for regulating the admission of water to the nozzle and in which the parts shall be so constructed and arranged that they will act as a valve to register the flow of water, thereby obviating the use of a construction whereby stopping of the water-passage or inlet-pipe by stones, dirt, or the like is obviated.

Furthermore, the object of the invention is to produce a nozzle designed particularly for use on street-sprinklers in which a minimum number of parts are employed and which is so constructed that the parts may readily be separated for the purpose of allowing access to the interior of the nozzle to remove any foreign substances which might tend to obstruct the passage of water.

Furthermore, the object of the invention is to produce a nozzle designed particularly for use on street-sprinklers in which the discharge of the water from the nozzle shall be so directed as to render the discharge from

all parts of the nozzle uniform, thus obviating the discharge of any greater quantity of water at one point than at another, resulting in "washing" of the street being sprinkled. 55

The invention consists in a sprinkler-nozzle composed of a pipe connected with a source of water-supply, a smaller pipe having one end closed and provided on its circumference with discharge openings or perforations, the smaller pipe being also provided on its interior with a deflecting-plate, whereby water is deflected from the lower discharge-openings, thereby preventing an abnormal discharge at that point and preventing washing of the street. 65

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a sprinkler-nozzle constructed in accordance with my invention. Fig. 2 is a central longitudinal section. 70

In the drawings, A represents a cylinder, which in use is preferably horizontal, and is supported and attached to a sprinkler-wagon or any other body in connection with which it is to be used by suitable supports *a*. Attached to one end of this cylinder A is a pipe B communicating with a source of water-supply and connected with the cylinder A by a tight joint B', provided with suitable packing *b*, insuring a close fit. 75

C represents a smaller cylinder designed to enter and slide freely back and forth in the cylinder A. The cylinder C has its outer end *c* closed, and its periphery is provided with a series of openings *c'*, preferably extending around the bottom and a short distance up the sides of the cylinder. Attached to the outer end *c* of the cylinder C is a projecting arm *c''*, to which is attached a lever *c'''*, connected with any suitable operating lever or rod, by which a sliding motion may be communicated to the cylinder C, and the same moved back and forth in the cylinder A to expose a greater or less number of openings *c'*, and thereby regulate the quantity of water discharged. 85

Interposed between the cylinders A and C are packing-rings *c''''*, whereby a water-tight joint between the two cylinders is obtained. 90

Located within the cylinder C is a deflector,

fender, or partition D, extending across the cylinder C about the center thereof and having its inner end *d* extending downward to within a short distance from the bottom of the cylinder. The purpose of this deflector is to direct the water passing into the cylinder B from the bottom of the cylinder, thereby preventing discharge of the water at that point in too large quantities, which might result in washing the street upon which the sprinkler is used. A sufficient space is left between the portion *d* of the deflector and the bottom of the cylinder C to permit the passage of the water in a sufficient quantity to the lower portion of the cylinder C to cause a discharge of an equal quantity from that portion to that discharged from the other portions of the cylinder.

While I have particularly described the perforated pipe as being arranged in the interior of the other pipe, it will be understood that, if desirable or advantageous, the perforated pipe may be placed on the outside of the other pipe and arranged to slide back and forth thereon to regulate the discharge of the water.

From the foregoing it will be seen that by my construction I produce a nozzle simply constructed, whereby the discharge of the

water may readily be regulated and in which no valve which is liable to become clogged is used. It will also be seen that my construction renders the separation of the parts easy, thus facilitating cleaning of the interior of the nozzle.

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

A sprinkler-nozzle composed of an unperforated pipe connected with a source of water supply and a perforated pipe having its outer end closed and provided on its circumference with discharge-perforations, the perforated pipe being placed in connection with and sliding back and forth with relation to the other to expose a greater or less number of discharge-openings, the perforated pipe being provided with a deflecting-partition provided with a depending end, whereby water is directed from the bottom of this pipe, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses:

FREDERICK E. BOWMAN.

Witnesses:

DAVID H. MEAD,
F. B. KEEFER.