(No Model.) 2 Sheets—Sheet 1.

A. JOHNSON.

STREET SPRINKLER MACHINE.

No. 588,437. Patented Aug. 17, 1897.

Fig. 1

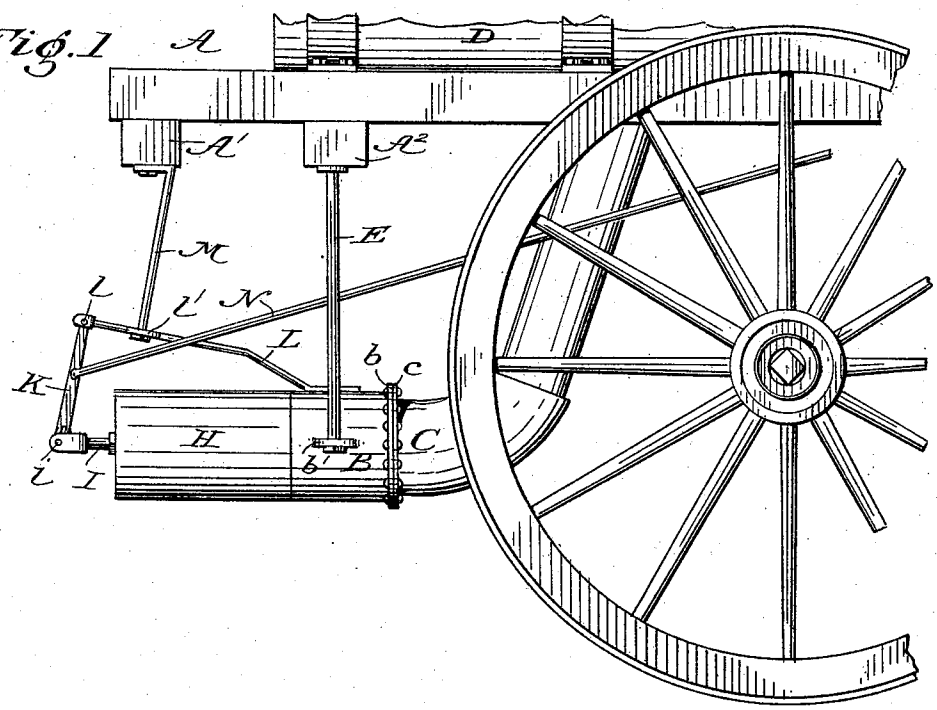


Fig. 2

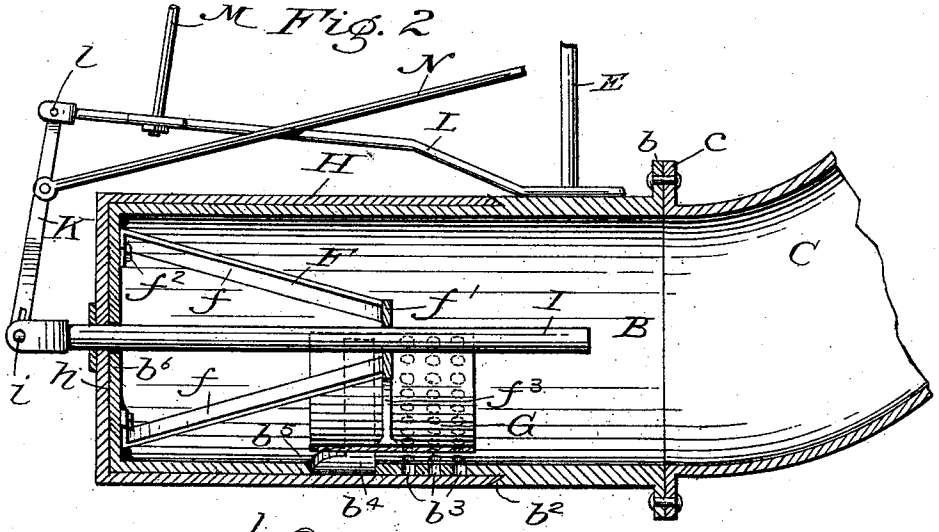
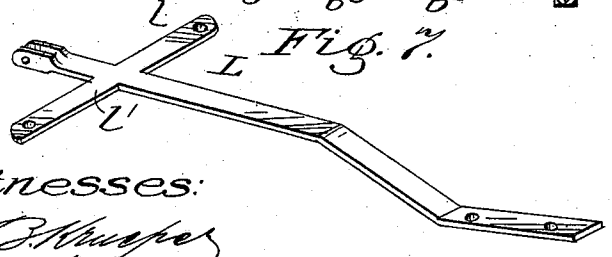


Fig. 7.



Witnesses:

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

A. JOHNSON.

STREET SPRINKLER MACHINE.

No. 588,437. Patented Aug. 17, 1897.

Fig. 3

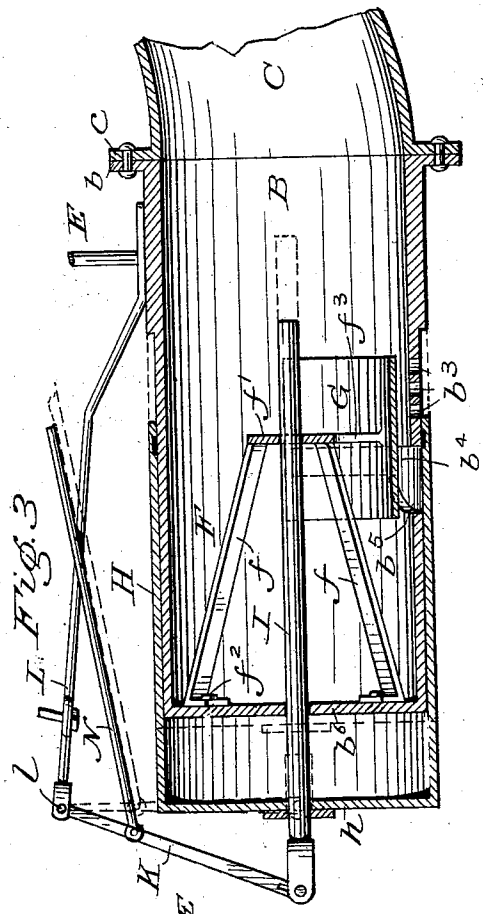


Fig. 5

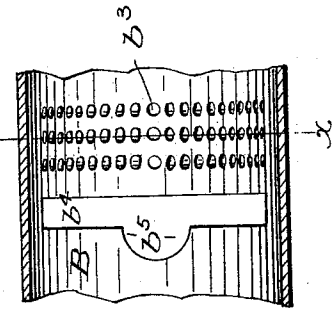


Fig. 4

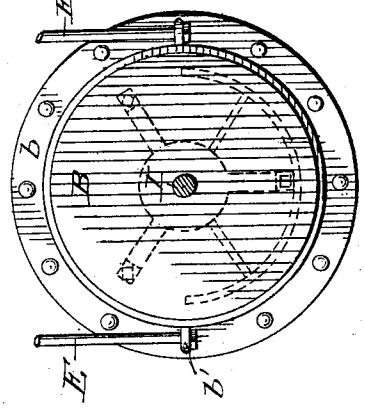
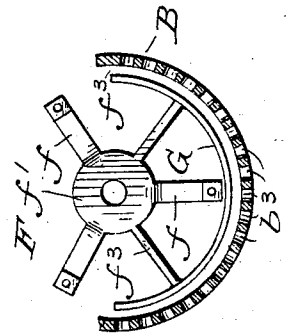


Fig. 6



Witnesses:-

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UNITED STATES PATENT OFFICE.

ALBERT JOHNSON, OF SOUTH BEND, INDIANA.

STREET-SPRINKLER MACHINE.

SPECIFICATION forming part of Letters Patent No. 588,437, dated August 17, 1897.

Application filed January 11, 1897. Serial No. 618,762. (No model.)

To all whom it may concern:

Be it known that I, ALBERT JOHNSON, a citizen of the United States, and a resident of South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Street-Sprinkler Machines, of which the following is a specification.

My invention relates to street-sprinklers wherein a cylindrical sprinkler-head provided with spray-openings is suspended from the frame of the wagon, and a longitudinally-movable sleeve fitted upon said sprinkler-head is adapted to control the spray-openings therein.

The objects of my invention are to provide improved means for moving the sleeve upon the sprinkler-head, in novel means for supporting a segmental shield within the sprinkler-head and above the spray-openings therein, in a novel construction of cylinder-head, wherein the form of the issue-opening has special advantages, and in a novel construction and arrangement of parts for supporting the operating rods and levers of the device for controlling the issue-openings of the sprinkler-head.

In the accompanying drawings, Figure 1 is a side elevation of my improved sprinkler attached to the rear end of the running-gear of a sprinkler-wagon, fragmental portions of which only are shown; Fig. 2, an enlarged sectional elevation of a sprinkler-head and its connections embodying my invention with the spray-openings therein closed; Fig. 3, a similar view of the said sprinkler-head with the cylinder-sleeve withdrawn to uncover the spray-apertures; Fig. 4, an end view thereof; Fig. 5, a sectional plan of a fragment of the sprinkler-head cylinder; Fig. 6, a transverse section thereof with the bearing-bracket and spray-opening shield suspended therefrom, and Fig. 7 a perspective view of the bracket for supporting the sleeve-operating lever.

The rear end of the frame A of a sprinkler-wagon has two parallel cross-beams A' A^2, from which the sprinkler-head cylinder B and its connections are suspended. The cylinder B has at its forward end an outer flange b, to which a corresponding flange c of an elbow C is bolted, the forward and upturned end of said elbow being connected by a hose or pipe with the bottom of the water-tank D, supported upon the frame A of the sprinkler-wagon. The cylinder B has lugs b' upon opposite sides thereof which receive the lower headed ends of suspension-bolts E, the upper ends of which are secured to the cross-beam A^2 of the wagon-frame.

The cylinder B is turned truly at its rear end, forming a shoulder b^2 at the forward end thereof. A series of spray-openings b^3 are arranged in rows back of said shoulder, and a transverse slit or issue opening b^4 is formed therein in the rear thereof of sufficient width to admit of the passage of small obstructions carried by the water which would clog up the spray-apertures. The back edge of the slit-opening b^4 has a recess b^5 in the middle or lowest portion thereof through which obstructions of unusual size may pass from the sprinkler-head. A bearing-bracket F, comprising arms f and end bearing-plate f', is secured at the free ends of the said arms by bolts f^2 to project into the cylinder of the sprinkler-head and supports radial pendent arms f^3, projecting from the bearing-plate f', which support a segmental shield G, which is made concentric to the cylinder B and is held a suitable distance therefrom to allow the water to pass in a thin sheet to the spray and issue apertures and also to take the direct pressure of the water from the spray-openings. By holding the shield in a fixed position over the spray and issue openings small obstructions will be excluded therefrom and will not be forced or become wedged in between the shield and cylinder.

The turned and reduced portion of the cylinder B is fitted snugly with a correspondingly-bored sleeve H, which may be moved longitudinally thereon to cover or uncover the apertures of the sprinkler-head cylinder and thus regulate the spray and issue of water from the sprinkler-head. When closed, the forward end of the sleeve H fits closely against the shoulder b^2 of the sprinkler-head and thus completely closes the sprinkler-head. The sleeve H, when moved longitudinally upon the cylinder B, is liable to stick and to be unduly strained if not pushed squarely in from the central and end portion thereof and thus at all times preserve the parallelism of the sleeve and cylinder. To effectively secure this action, the bearing-plate f', cylin-

der-head b^6, and sleeve-head h are correspondingly boxed in the line of axis of the cylinder B to receive a guide-rod I, the sleeve being securely fixed thereto and the end of the rod I projecting rearwardly therefrom and fitted with a bolt i, which passes through a slot in the pendulous end of a lever K, suspended from a pin l upon the rear end of a bracket L, the forward end of the latter being securely attached to the cylinder B, near the forward end thereof. The bracket L has a cross-bar l' at the rear end thereof which is secured at its ends to the lower ends of suspension-rods M M, the upper ends of which are firmly bolted to the cross-beam A′ of the wagon-frame. The bracket L is thus securely held and braced by the cross-bar and double rods, and the lever K may thus be moved truly to operate the guide-rod and sleeve without undue strain thereon. The lever K is connected to a rod N, operated by the driver in the usual way.

The parts thus connected may be easily operated, as the outer sleeve is greatly released of pressure, and as it is supported upon the guide-rod held between the widely-separated bearings of the bracket-cylinder and sleeve when the latter is withdrawn to its full extent and the latter requires other support than that of the cylinder.

I am aware that a cylinder having a transverse oblong discharge-opening and having a valve device or sleeve provided with a graduated opening for varying the width of the sheet of water issuing from the same has been used heretofore. The cylinder discharge-opening remaining the same therein, it is obvious that obstructions contained within the said sprinkler head or cylinder of greater size than the mean size of the discharge-opening therein cannot be removed therefrom by recessing or enlarging certain parts of the opening in the valve-sleeve.

I claim as my invention and desire to secure by Letters Patent—

1. In a sprinkler, the combination with the cylinder of a sprinkler-head, having a spray-opening therein, of a bearing-bracket secured thereto, a covering-sleeve fitted upon the said cylinder, a guide-rod secured to the sleeve supported upon said bracket and adapted to hold said cylinder thereon, substantially as described.

2. In a sprinkler, the combination with the sprinkler-head cylinder having a spray-opening, a bracket secured thereto and projecting therein, a segmental shield secured to said bracket fixedly within said cylinder and an outer sleeve, substantially as described.

3. In a sprinkler, the combination with the sprinkler-head cylinder having a spray-opening therein, a bearing-bracket secured to said cylinder, a segmental shield fixedly supported upon said bracket, an outer sleeve fitted upon the cylinder and a guide-rod secured to the sleeve and supported at its inner end in bearings of said bracket, substantially as described.

4. In a sprinkler, the combination with the sprinkler-head cylinder having an issue-opening provided with a rear lateral recess therein and a sleeve to fit said cylinder to close and to regulate the size of said opening and also to expose the rear lateral recess of the issue-opening in the cylinder, substantially as described.

5. In a sprinkler, the combination with the wagon-frame of the sprinkler-head cylinder suspended therefrom, a bracket-rod secured at its forward end to the cylinder and provided at its rear end with a cross-bar and a pivot-bearing, suspension-rods connecting the respective end of said cross-bar to the frame, a lever suspended from said pivot-bearing and a rod reciprocating within said cylinder and operated by the lever, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name in the presence of two subscribing witnesses.

ALBERT JOHNSON.

Witnesses:
B. KRUEPSE,
C. H. ZABELER.