

(No Model.)

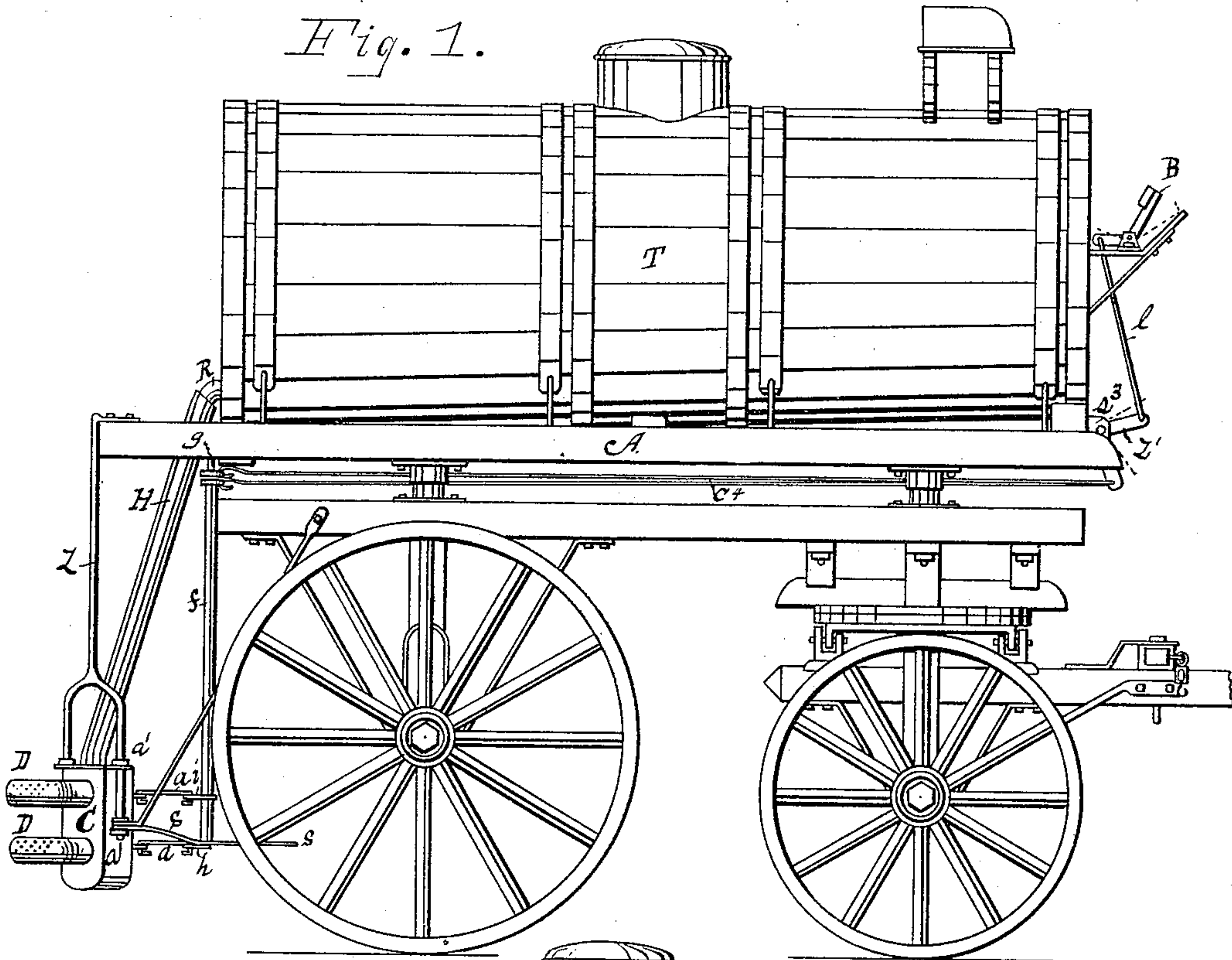
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W. H. MILLER.  
STREET SPRINKLER.

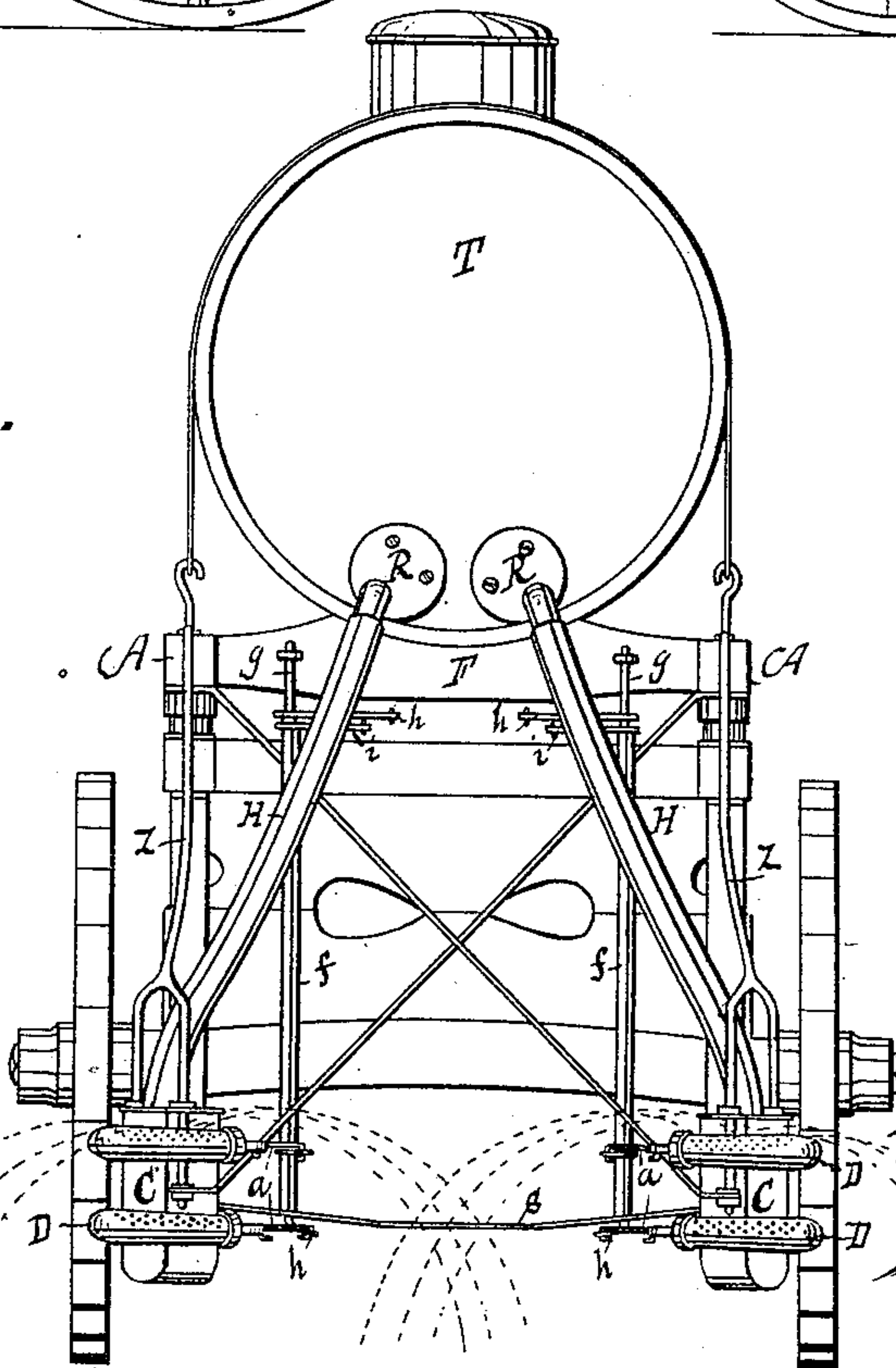
No. 336,252.

Patented Feb. 16, 1886.

*Fig. 1.*



*Fig. 2.*



WITNESSES:

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*B. A. Wheeler*

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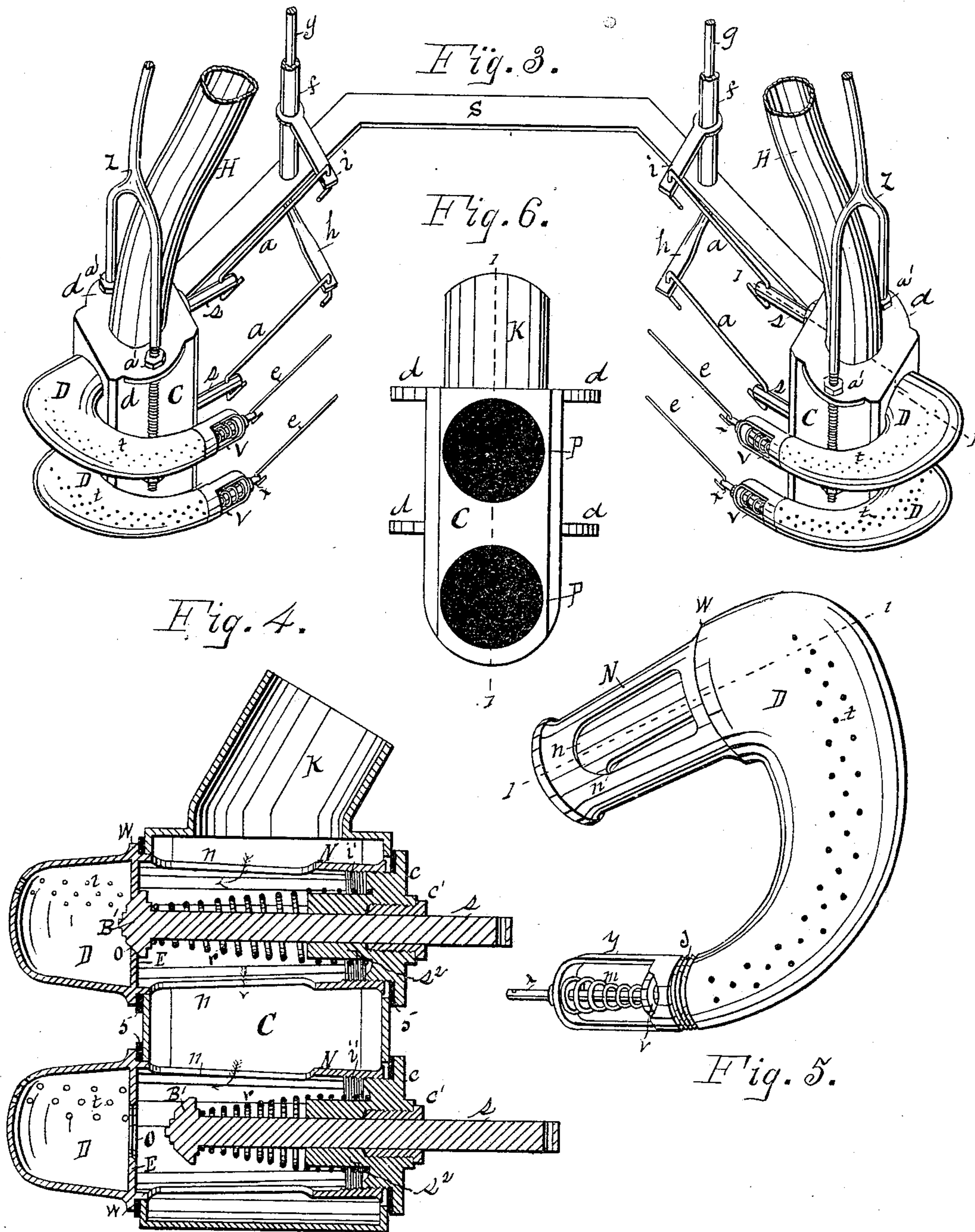
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# UNITED STATES PATENT OFFICE.

WILLIAM H. MILLER, OF SOUTH BEND, INDIANA.

## STREET-SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 336,252, dated February 16, 1886.

Application filed November 2, 1885. Serial No. 181,689. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. MILLER, 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 Street-Sprinklers; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My present invention relates to that class known as "street-sprinklers," and is designed as an improvement upon Letters Patent No. 230,868, issued to me on August 10, 1880.

The object of my invention is to provide a more effectual means for sprinkling, the device being so constructed that a large or small amount of water may be thrown, at the will of the operator, from either or both sides of the sprinkler, alternately or simultaneously, the parts being so constructed that the water is rapidly cut off or started—as in crossing walks and the like. I employ a series of distributing-pipes and valves having independent connections. The distributing-pipes are provided also with discharge-valves for cleaning them of all foul matter that may collect therein; and my invention consists in the arrangement of parts, as hereinafter set forth, and pointed out in the claims.

In the drawings forming a part of this specification, Figure 1 is a side elevation of a wagon and tank containing my invention. Fig. 2 is a rear elevation of same. Fig. 3 is an enlarged isometrical view of the distributors and connecting parts. Fig. 4 is an enlarged vertical section of the distributors, support, and valve-connections, on dotted lines 1 1 of Figs. 3, 5, and 6. Fig. 5 is an enlarged perspective of a distributor and cleaning-valve. Fig. 6 is a front elevation of the supporting-case.

In the drawings, T is the water-tank; A A, side bars of tank-frame; F, transverse connecting-bar at rear end; B, foot-lever, of

which there is a series. All of said parts are common.

R R are discharge-elbows attached to the rear end of the tank. H H are hose-couplings fitting over said elbows, extending downward and over the elbows K K of the supporting-cases C C. Said cases are of cast metal, are hollow, having a closed bottom, with ears *d d*, and port-holes P P, extending through the front and rear walls of each case. Said cases are suspended upon forked braces Z Z. Each brace at its upper end is attached to the rear end of the side bars of the tank-frame, as clearly shown in Figs. 1 and 2. The braces Z Z pass through the ears *d* of the cases, and are firmly held by means of nuts *a' a'*. The cases are braced transversely by means of the step-brace S, which is arched forward, forming a bearing or support for the vertical rods *g g*, which pass through it and support the lower end of the pipe-shafts *f f*, surrounding said rods. The upper end of the rods *g g* are journaled on the rear face of the bar F. (See Fig. 2.) Said rods and hollow shafts are provided with crank-arms *h h* and *i i* at or near their ends, as shown in Figs. 1, 2, and 3. I attach to each of the upper crank-arms a horizontal rod, C'. Said rods are located below the tank. Their front ends are each attached to an elbow-lever, Z'. Said levers are pivotally attached to a support, *s*<sup>3</sup>, and by an intermediate rod, *l*, are attached to a foot-lever, B, as clearly shown in Fig. 1.

In Fig. 5 I show one of the distributors, which is in the form of a quadrant, having formed integral therewith a sleeve, N. Passing through the upper and lower walls of the sleeve is a port or water-supply hole, *n*, and W is a flange surrounding the sleeve. Said sleeve is made sufficiently small to freely pass through the port-holes P P, at the front of the case C, and long enough to pass through said case and meet the back wall, as shown in Fig. 4. The inner end of each sleeve is screw-threaded, as shown at *i'* of Fig. 4.

*c* is a flange-cap fitting around the port-holes at the rear of the case, and is screw-threaded to the sleeve N. Said cap is provided with a packing-cap, *c'*, and sleeve *s*<sup>2</sup>.



*s* is a valve-stem, which passes through the stuffing-cap, carrying a valve, *B'*, on its inner end. Passing around the valve-stem over the sleeve *s'*, and against the valve *B'* and flange-cap *c* is a coiled spring, *r*.

*E* is a partition, having a port-hole, *o*, which is closed by the valve *B'*, as clearly shown in upper portion of Fig. 4.

When the parts are together, as shown in Figs. 2 and 4, I place a packing-ring, 5, between the flange *W* and the case, also between the cap *c* and said case, as shown in Fig. 4. By this arrangement the turning up or tightening of the cap forces the flange *W* and cap against the case securing the distributor to the case, making a water-tight joint around the ports *P P*.

I attach the upper and lower valve-stems, *s*, to the crank-arms *i* and *h* by means of the coupling-rods *a*, as shown clearly in Fig. 3, whereby each valve of a distributor has an independent coupling to a foot-lever, *B*, at the front of the sprinkler.

*t* represents a series of perforations, which I form in the arc of each distributor above the horizontal center, which allows the lower half of each distributor to remain charged with water when the supply is cut off from the tank, thereby causing an upward stream from the perforations and an immediate action when the water is admitted to the distributors. I form the perforations in the upper distributors smaller than the perforations of the lower distributors. By this arrangement a light stream may be thrown by pulling the valves of the upper distributors. To throw a larger stream, the valves of the lower distributors may be opened, and to throw a still larger supply, the valves of all the distributors may be opened by depressing the series of foot-levers *B*. When a foot-lever is thrown forward to the dotted position of Fig. 1, the lever and rods connecting the foot-lever with a valve-stem, *s*, draws the valve *B'* back, opening the port *o*, admitting water into the distributor through the ports *n* and *o*, as shown at bottom of Fig. 4 and indicated by arrows. As soon as the pressure upon the foot-lever is released the coiled spring *r* forces a valve, *B'*, over the port *o*, stopping the flow of water into the distributor. The coiled spring also forces the operating levers and rods back to their normal position.

In Fig. 5, *y* is a yoke screw-threaded to the nose *J* of the distributor. Passing through the yoke is a valve stem, *x*, carrying a check-valve, *v*, on its inner end. Said valve fills the opening in the end of the distributor and is closed against said opening by the coiled wire *m*. Each distributor is provided with a valve, and *e* are rods which extend forward and are connected to a central rod, (not shown,) which extends forward to the driver, and by pulling a suitable lever all of the valves may be opened simultaneously for the following purpose: Leaves, sticks, and foul matter fre-

quently collect in the outer end of a sprinkler-pipe, and to clean them they have been provided with a cap which had to be unscrewed to allow water to flow out to clean them of all refuse; but by this arrangement the driver may at any time, and without stopping his team, pull the valves and clean the distributors.

It will be observed from the foregoing that I employ on both sides of the apparatus short circular distributors, which are attached to a suspended supply-case, in which is located the valves for admitting water into the distributors, that the short curves given the distributors cause the water to be well spread. The distributors being small, but little water is required to charge them, and they are rapidly emptied. The parts, being small and strong, are durable, thus making a complete and durable sprinkler.

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

1. In a sprinkling device, and in combination, the tank, the hose-pipes connecting the tank with the metal cases *C C*, suspended from the rear corners of the tank-frame, the distributors passing through said cases, the valves and ports located in the sleeves of each distributor, and means for operating said valves.

2. In a sprinkling device, the combination of the tank, the hose-pipes connecting said tank with the cases suspended from the rear corners of the tank-frame, said cases each containing a set of valves and arc-shaped distributors having perforations, the sleeves formed integral with the distributors, having port-holes therein, and screw-threaded caps securing said distributors to the case.

3. In combination with the case, the hose-pipe connecting said case with the tank, a set of arc-shaped distributors having perforations and sleeves with ports formed therein, the partition and valve-port located in each distributor, the valve-stem, its valve, and coiled wire housed within each sleeve, and screw-caps connecting said distributor to the case, as and for the purposes specified.

4. In a sprinkling device, the combination of the cases *C C*, each having an independent pipe-connection with the tanks, the set of distributors mounted on each case, one having fine the other coarse perforations, as specified, and a discharge-valve located in the end of each distributor, a valve-port and valve located in each distributor, the valve-stem and its stuffing-box, the coiled wire for actuating said valves, and intermediate parts connecting said valve-stems with an independent foot-lever, substantially as specified.

5. The combination of the case *C*, having port-holes through its front and rear walls, the arc-shaped distributor having sleeve *N*, formed integral therewith, the port-holes *n n*, the series of perforations, the flange *W*, the

cap C, screw-threaded to the sleeve, and packing-rings, as and for the purposes specified.

5 6. In combination with the tank, the hose-pipes, the metal cases C C, supporting in duplicate the distributors, the ports, and valves located in the sleeves of said distributors, the discharge-valves at the free ends of said distributors, as and for the purposes specified.

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

WILLIAM H. MILLER.

Witnesses:

LUCIUS HUBBARD,  
WM. M. WHITTEN.