

(No Model.)

F. & L. WINKLER.
SPRINKLER HEAD.

No. 538,993.

Patented May 7, 1895.

Fig. 1.

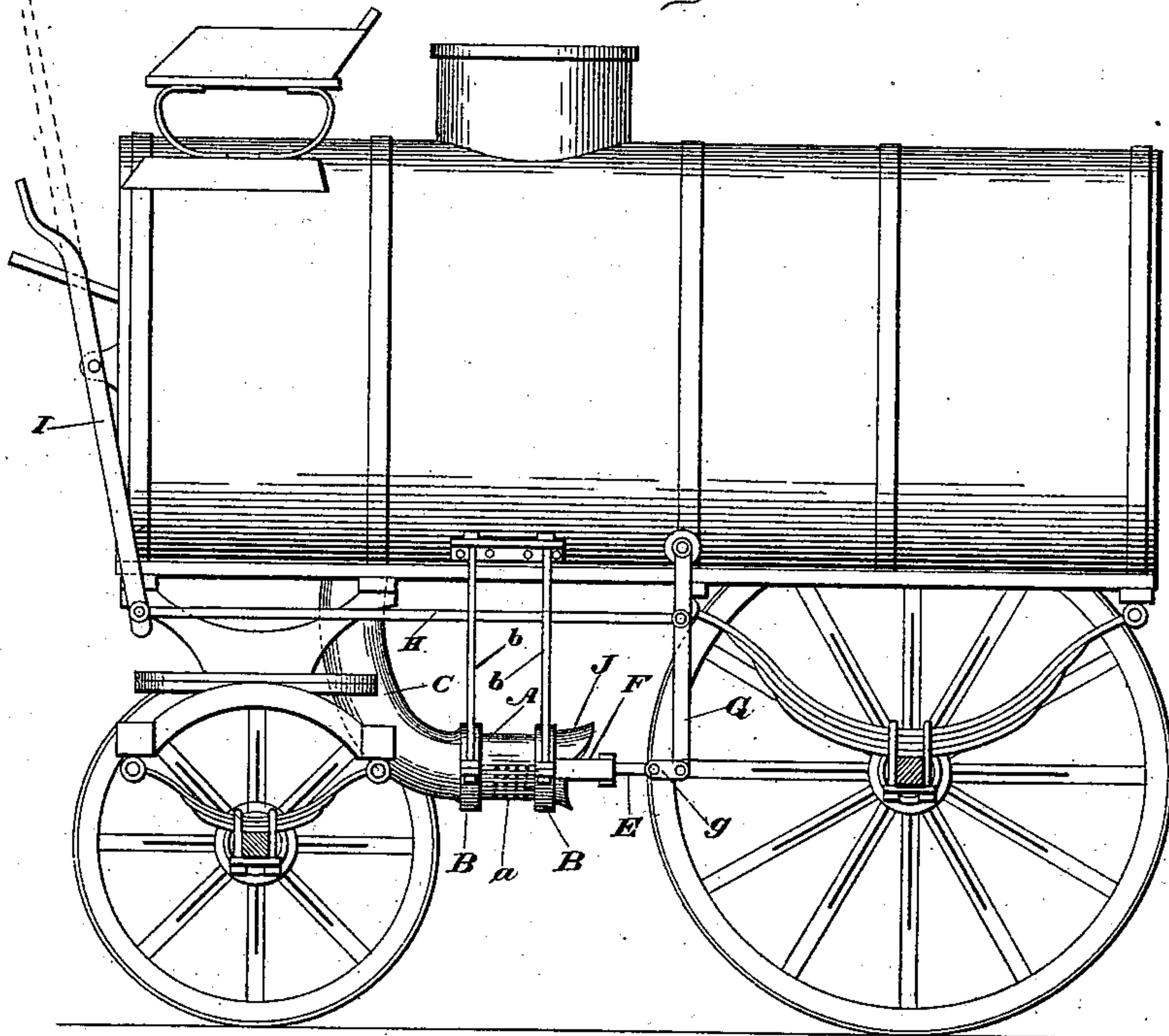


Fig. 2.

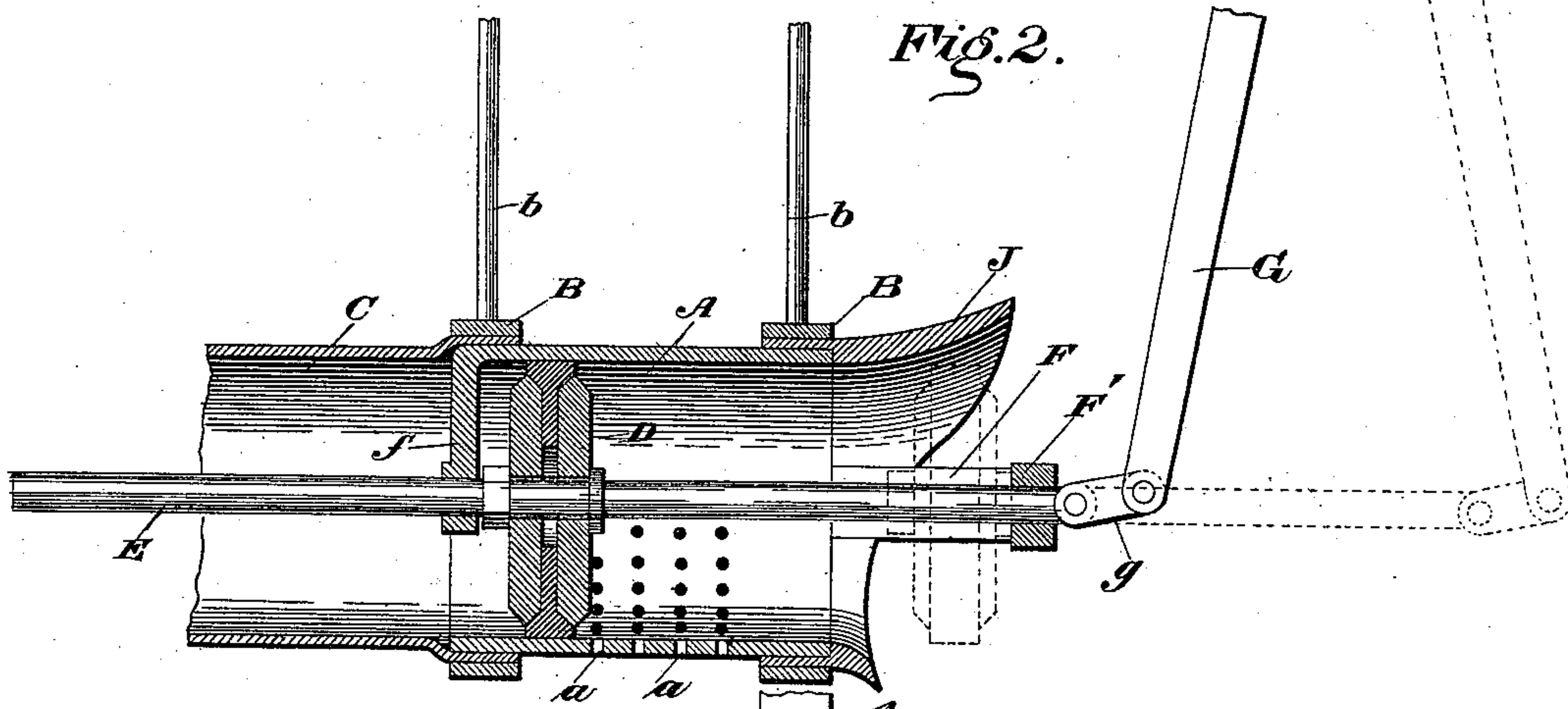
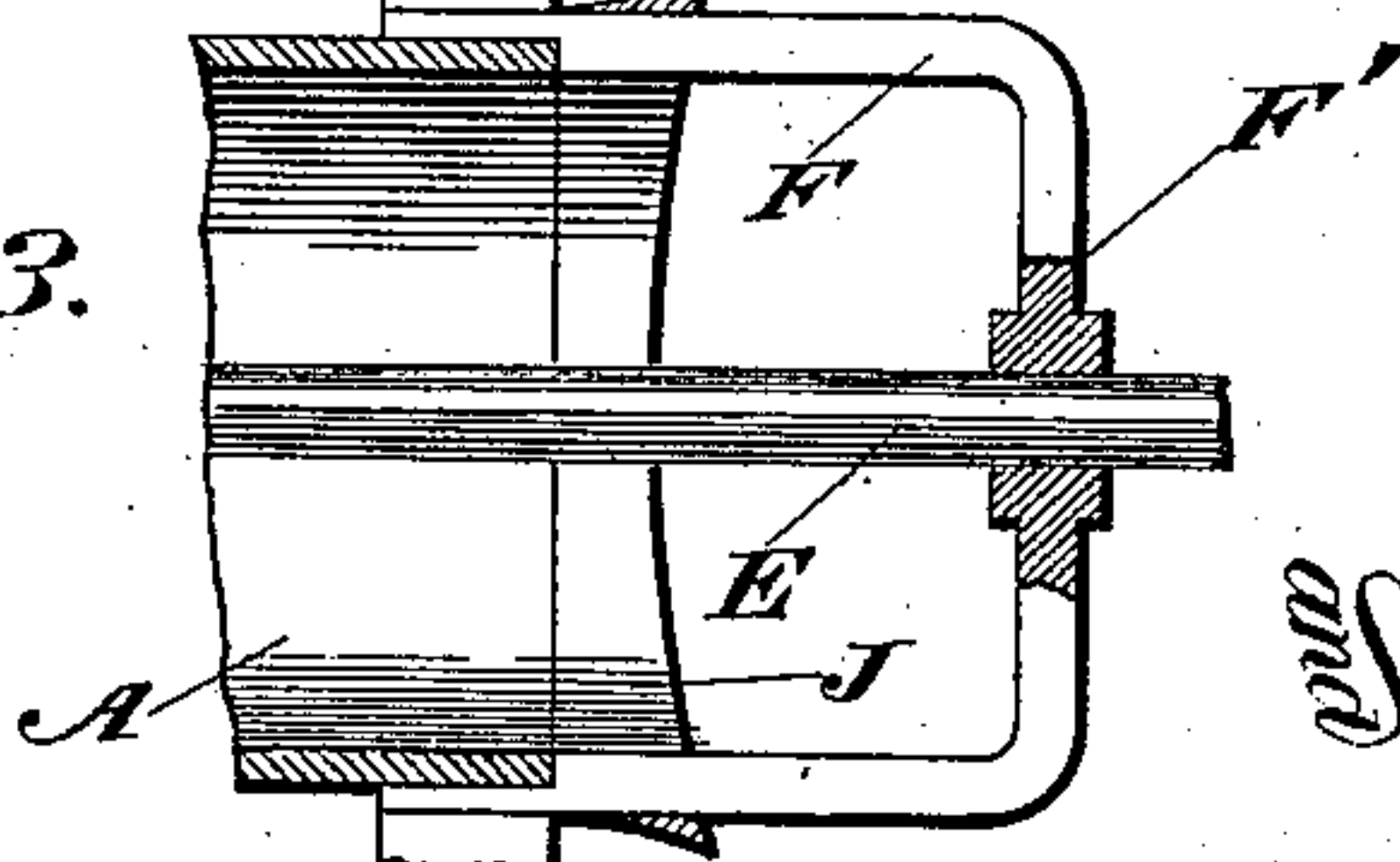


Fig. 3.



Witnesses:

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By their Attorneys, *Alexander & Soule*

UNITED STATES PATENT OFFICE.

FRED WINKLER AND LENHART WINKLER, OF SOUTH BEND, INDIANA.

SPRINKLER-HEAD.

SPECIFICATION forming part of Letters Patent No. 538,993, dated May 7, 1895.

Application filed May 1, 1893. Serial No. 472,546. (No model.)

To all whom it may concern:

Be it known that we, FRED WINKLER and LENHART WINKLER, of South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Sprinkler-Heads; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The present invention is an improvement in sprinkling machines, especially designed for street sprinklers, and its objects are to enable the "washing out" of the sprinkler head or cylinder to be effected without disconnecting any of the operative parts of the device, and whenever it is desired this is accomplished by so constructing the sprinkler device that the plunger or piston which controls the sprinkling can be entirely withdrawn from the cylinder, the latter being left entirely open at one end, and all matters therein can be removed through such open end.

Other important objects are to provide means for supporting or suspending the piston in position to re-enter the cylinder without the necessity of handling it, and means whereby the piston can be adjusted in the cylinder to regulate the amount of sprinkling therefrom, or removed for washing out, and re-entered in the cylinder at the will of attendant.

The invention consists in the novel construction and combination of parts hereinafter described and claimed.

In the drawings, Figure 1 represents a side elevation of a sprinkling-cart with our improved sprinkler attached thereto. Fig. 2 is an enlarged longitudinal sectional view of the sprinkler. Fig. 3 is a detail sectional view of part of the sprinkler.

We have illustrated the sprinkler as attached to an ordinary street sprinkling machine with which it is proposed to employ it. This consists of a tank of any suitable construction mounted on wheels, and we have shown the sprinkler as suspended below the tank and between the front and rear axles.

The sprinkler proper consists of the cylinder A, which is open at both ends and sup-

ported in split rings B, suspended by rods b from the tank or running gear, or in other suitable manner. The front end of the cylinder is connected to the lower end of a pipe C which communicates with the interior of the tank. The cylinder has a series of jet perforations *a* in its lower side through which the water escapes in sprinkling.

The piston D in the cylinder is of any suitable construction, being preferably formed as described and shown in our accompanying application for patent, filed April 15, 1893, Serial No. 470,556. As shown it is mounted about centrally on a rod E that extends through guide openings in guides or yokes *f*, F, at the opposite ends of the cylinder as shown in the drawings. The outer yoke F is U-shaped, its transverse portion F' being opposite *f* and held such a distance from the rear open end of the cylinder that the piston can be drawn entirely out of the cylinder as indicated in dotted lines Fig. 2, the rod being of a length to permit the piston to be shifted thus rearwardly out of the cylinder, or forwardly so as to prevent the water escaping out of the perforations *a* without the ends of rod E disengaging the guides.

The rear end of rod E is loosely connected as by a link *g* to one end of a vibrating lever G which is pivoted at its other end to the tank, or other convenient relatively fixed point. The lever G may be vibrated by means of a pitman H which is connected thereto at one end and by its other end to a foot or hand lever I fulcrumed on a suitable support near the driver's seat in position to be operated by the driver, so that the driver or an attendant can by shifting lever I, move the piston rearwardly in the cylinder so as to uncover perforations *a* and allow the water from the tank to escape therethrough, or forwardly so as to prevent water entering through pipe C into the cylinder; or the piston can be moved so far rearward as to withdraw it from the cylinder entirely, and thus permit the same to be "washed out." This latter feature we consider one of the most valuable features of the invention, as it enables the entire action of the sprinkler and its washing out to be controlled by the driver, and as the rear end of cylinder is left open, when the piston is removed everything in the

cylinder can be washed out or removed at once, and the perforations readily cleansed without taking apart the sprinkler. Furthermore it will be observed that the piston remains suspended directly opposite the open end of the cylinder so that as soon as the cleansing is accomplished the piston can be reentered in the cylinder without manual handling thereof. The piston can thus be removed for wash out purposes and replaced by simply shifting the lever. The rear end of the cylinder is also formed or provided with a flaring flange J which is wider at top than at bottom preferably. This flange prevents the water dashing out laterally or upwardly when the piston is drawn out of the cylinder, and assists in guiding the latter back thereinto.

The rod E being supported at each side of the piston aids in centering the latter correctly within the cylinder and lessens peripheral wear thereof, and as the weight of piston is transferred in whole or in part through the rod to guides F, f, the open ended cylinder and removable but suspended piston enable the whole operation of the sprinkler to be controlled by the driver from his seat and is the important feature of the invention.

Having described our invention, what we claim as new, and desire to secure by Letters Patent thereon, is—

1. The combination of the open-ended perforated cylinder; with the piston, the supports therefor, whereby it is suspended in position to reenter the cylinder when removed therefrom, and the devices substantially as described for shifting said piston, substantially as set forth.

2. The combination in a sprinkling machine of a tank, a perforated open-ended cylinder suspended thereunder, a water supply pipe from the tank to the cylinder; a piston in

said cylinder, supports therefor, whereby when it is withdrawn from the cylinder it is upheld in position to reenter the same without handling, and means for shifting said piston, substantially as specified.

3. The combination of the open-ended perforated cylinder having a flange on its open end, with the piston in said cylinder removably mounted therein, devices for sustaining said piston when removed from the cylinder and the devices whereby said piston can be shifted from any convenient point, either to uncover the perforations, or entirely out of the cylinder and back into the cylinder, and to shut off water therefrom, all without handling of the piston, substantially as specified.

4. The combination of the open-ended perforated cylinder, a removable piston therein, a piston rod, guides and supports for said rod, a lever, and a rod pivotally connected to said lever and piston rod; with the water supply pipe connected to the perforated end of the cylinder, substantially as and for the purpose set forth.

5. In a sprinkler the combination of a perforated open ended cylinder, the guides attached to the opposite ends of the cylinder the piston rod playing through both guides and the piston on said rod intermediate of the guides adapted to be drawn entirely out of the cylinder for "wash out" purposes, substantially as and for the purpose described.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

FRED WINKLER.
LENHART WINKLER.

Witnesses:

JAS. DU SHANE,
GEO. P. ROSE.